

## Review of *Omocoris* LINDBERG, 1930 and a description of a new genus to accommodate *Eurycolpus dimorphus* WAGNER 1961 (Heteroptera: Miridae: Phylinae)

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### ABSTRACT

The genus *Omocoris* LINDBERG is revised and *O. unicolor* sp.n. is described from Uzbekistan. A new genus, *Josifovius*, is erected to accommodate the type species *Eurycolpus dimorphus* WAGNER, 1961. *Omocoris erythrophtalmus* CARAPEZZA, 1997 is considered as a species incertae sedis. Illustrations of the male and female genitalia, tarsus and pretarsus, photographs of the dorsal habitus, hosts and distributional records of discussed species are provided.

**Keywords:** Heteroptera, Miridae, Phylini, *Omocoris*, *Josifovius*, new genus, new combination, distribution.

### INTRODUCTION

*Omocoris* LINDBERG, 1930 is a small genus currently containing three species known from South Mediterranean or Central Asian regions. The present paper provides revised generic assignments for the species currently placed in the genus and a description of a new species found in the collection of Zoological Institute, Russian Academy of Sciences. A revised diagnosis and redescriptions for the genus and known species are given. Examination of *O. dimorphus* (WAGNER, 1961) concludes that a new genus is required to accommodate this species properly.

Bar code labels were attached to the specimens and are referred to as unique specimen identifiers (USIs). Generally each USI label corresponds to a single specimen; however, some USI labels correspond to two or three specimens if several specimens are mounted on one pin. As a way of accessing additional information, such as color photographs, specimens dissected, notes, collecting method, and specimens photographed for specimens examined in the Planetary Biodiversity Inventories Project on Plant Bugs and the present paper please refer to the [www.discoverlife.org](http://www.discoverlife.org) website. The original locality data are given in square brackets, if different from the currently existing toponyms (see specimens examined).

All measurements are in millimeters (see Table 1). All scale bars are 0.05 mm. All specimens examined in the course of this study, including types, are retained at the Zoological Institute, St. Petersburg.

This paper is dedicated to Michail Josifov in recognition of his inestimable contribution to our knowledge of the Palearctic Heteroptera, particularly the Miridae.

## TAXONOMY

### *Omocoris* LINDBERG, 1930

*Omocoris* LINDBERG, 1930: 20-21 (gen. n.).

Type species by original designation: *Omocoris parallelus* LINDBERG, 1930 (= *Oncotylus cunealis* REUTER, 1904; placed by CARVALHO (1952: 62) in synonymy with *Eurycolpus*, restored by KERZHNER & MUMINOV 1964: 46-47).

*Oncotylista* KIRITSHENKO, 1959: 108-109 (nom. nud.).

*Omocoris*: WAGNER, 1975: 267-269 (description and key to spp.).

Diagnosis: Recognized by the strong sexual dimorphism, viz. the male being long, slender, and parallel-sided (Figs 1, 3), while the female is broadly ovate, strongly brachypterous, with the fused corium and clavus, absent cuneus and membrane, and apex of hemelytron reaching at most posterior margin of abdominal tergum III (Figs 2, 4). Antennal segment I long, nearly equal in length to pronotum, at least twice as long as interocular distance in both sexes. Dorsum with simple dark setae; tibial spines dark. Sensory lobe of the left paramere with flattened, obtuse, apically bifid apex (Figs 23, 24). Vesica with subapical secondary gonopore, two straight apical blades, and more or less developed series of spicules located between secondary gonopore and base of the blades (Figs 7-10).

Most similar among the Palearctic phyline genera to *Eurycolpus* REUTER, 1875 and *Oncotylus* FIEBER, 1858 in the structure of the pretarsus with a comparatively large pulvillus which is apically unattached to the claw, the general appearance, coloration, body proportions of the male, and the elongate head. Separated from *Oncotylus* by the strongly brachypterous female, the distinctly concave pronotal margins in the male, long antennal segment I, comparatively short pulvillus, and the different structure of the left paramere

and vesica. The male of *O. viridiflavus* (GÖEZE, 1778) is similar to the male of *Omocoris* species in the long, slender and parallel-sided body with thin, long legs, somewhat concave pronotal margins, and the comparatively long antennal segment I. However, the female of this species as well as all its congeners are macropterous; additionally the male has a single-coned vesica, and the left paramere has a long and smoothly tapering sensory lobe. *Eurycolpus* differs from *Omocoris* in the presence of a subapical notch on the claw

**Table 1.** Measurements, mm

Species		Length					Width		
		Body	Cun- Clyp	Prono- tum	Ant- Seg1	Ant- Seg2	Head	Prono- tum	Inter- OcDi
<i>O. cunealis</i>									
♂ (N=5)	<b>Mean</b>	6.40	5.58	0.76	0.86	2.09	1.02	1.52	0.37
	SD	0.38	0.37	0.05	0.08	0.17	0.03	0.05	0.02
	Range	1.00	0.87	0.13	0.15	0.40	0.07	0.12	0.04
	Min	5.80	4.98	0.70	0.78	1.90	0.98	1.48	0.35
	Max	6.80	5.85	0.83	0.93	2.30	1.05	1.60	0.39
♀ (N=5)	<b>Mean</b>	5.34	2.92	0.76	0.94	1.97	1.10	1.26	0.45
	SD	0.38	0.21	0.04	0.02	0.11	0.07	0.06	0.02
	Range	0.80	0.48	0.10	0.05	0.23	0.18	0.13	0.04
	Min	5.00	2.70	0.70	0.90	1.88	1.05	1.20	0.43
	Max	5.80	3.18	0.80	0.95	2.10	1.23	1.33	0.46
<i>O. unicolor</i>									
♂ (N=5)	<b>Mean</b>	5.48	4.74	0.69	0.65	1.65	0.98	1.35	0.36
	SD	0.16	0.14	0.05	0.04	0.10	0.02	0.09	0.02
	Range	0.40	0.33	0.13	0.08	0.25	0.05	0.20	0.04
	Min	5.30	4.58	0.60	0.63	1.55	0.95	1.25	0.34
	Max	5.70	4.90	0.73	0.70	1.80	1.00	1.45	0.38
♀ (N=5)	<b>Mean</b>	4.78	0.44	0.71	0.68	1.54	1.04	1.18	0.43
	SD	0.24	0.25	0.03	0.05	0.10	0.01	0.02	0.02
	Range	0.60	0.58	0.08	0.13	0.25	0.03	0.05	0.05
	Min	4.50	0.00	0.68	0.63	1.38	1.03	1.15	0.40
	Max	5.10	0.58	0.75	0.75	1.63	1.05	1.20	0.45
<i>J. dimorphus</i>									
♂ (N=2)	<b>Mean</b>	4.60	4.10	0.53	0.45	1.58	0.78	1.08	0.29
	Range	0.20	0.20	0.00	0.00	0.00	0.01	0.00	0.00
	Min	4.50	4.00	0.53	0.45	1.58	0.78	1.08	0.29
	Max	4.70	4.20	0.53	0.45	1.58	0.79	1.08	0.29
♀ (N=2)	<b>Mean</b>	3.65	2.83	0.50	0.35	1.10	0.76	1.01	0.38
	Range	0.30	0.25	0.05	0.00	0.05	0.08	0.08	0.00
	Min	3.50	2.70	0.48	0.35	1.08	0.73	0.98	0.38
	Max	3.80	2.95	0.53	0.35	1.13	0.80	1.05	0.38

(Figs 31-32), the macropterous female, the mixed vestiture composed of silver and dark setae, antennal segment I shorter than interocular distance, the thin and apically pointed sensory lobe of the left paramere, and the vesica strongly twisted with a very long and thin single apical blade, and secondary gonopore distant from the apex.

Description: **Male:** COLORATION (Figs 1, 3): Dorsum and venter pale, greenish yellow; labium somewhat darkened apically; all femora densely covered with minute rounded pale brown spots, rarely uniformly pale; tibiae always uniformly pale; cuneus pale or reddish. SURFACE AND VESTITURE: Dorsum smooth, shining; hemelytra weakly granulate; entire dorsum with dense, dark, adpressed to semierect, simple setae; venter covered with reclining pale simple setae and sparse dark setae; all legs and antennae with dense, dark, semiadpressed, simple setae half as long as those on hemelytra; tibial spines dark; apex of antennal segment I and femora with long dark spine-like setae somewhat



**Figs 1-4:** Dorsal habitus of *Omocoris* and *Josifovius* spp.: **1-2**, *O. cunealis*: **1** - ♂ (AMNH\_PBI 00149570), **2** - ♀ (AMNH\_PBI 00149626); **3-4**, *O. unicolor*: **3** - ♂ (AMNH\_PBI 00149580), **4** - ♀ (AMNH\_PBI 00149626); **5-6**, *J. dimorphus*: **5** - ♂ (AMNH\_PBI 00149574), **6** - ♀ (AMNH\_PBI 00149576).

thinner than tibial spines; spine-like setae on femora sparse, mainly distributed along fore margin of fore femora, hind margin and apices of middle and hind femora. **STRUCTURE:** Body strongly elongate, parallel-sided, total length 5.3-6.8. Head: Elongate, frons sloping and distinctly projecting beyond anterior margin of eyes; clypeus prominent and visible from above; eyes large; antennae rather long, with segment I as long as or slightly shorter than pronotum; labium reaching but not surpassing hind coxae. Thorax: Pronotum trapeziform, elevated posteriorly, with weakly defined calli, concave margins, rounded and posterior angles somewhat protruding laterally; metathoracic scent-gland evaporatory area long and narrow, wedge-shaped. *Legs:* Slender; hind femora rather thin and long, surpassing apex of abdomen; tarsal segment II slightly longer than segment III (Fig. 28); claw (Fig. 29) rather long, thin, apically curved; pulvillus large, flaplike, reaching midpoint of claw curvature, apically free, not attached to the claw. **GENITALIA:** Genital segment: Rather large, about 0.4 of abdomen, gradually tapering, with broadly rounded apex, without distinctive ornamentation. Parameres: Right paramere lanceolate, of typical phyline shape, comparatively long (Fig. 26); left paramere (Figs 23, 24, 27) with very broad, apically bifid sensory lobe, apical process thin and strongly curved apically. Apex of theca: Shape typical of many phylines (Fig. 25). Vesica: Comparatively long and thin, S-shaped, apically with two straight blades of unequal length and more or less developed series of spicules between secondary gonopore and base of blades; secondary gonopore subapical, with well developed sculpture (Figs 7-10).

**Female:** Body (Figs 2, 4) short, stout, strongly brachypterous, total length 4.5-5.8. **COLORATION, SURFACE AND VESTITURE:** As in male. **STRUCTURE:** Head: Similar to that of male but with distinctly smaller eyes and more convex frons. Thorax: Not elevated posteriorly; pronotum and scutellum almost flat in lateral view; pronotum trapeziform to nearly square, with straight margins; posterolateral angles not protruded. *Hemelytra:* Strongly brachypterous; lateral margins broadly convex; corium and clavus fused; cuneus and membrane absent; apex of hemelytron rounded, reaching at most posterior margin of abdominal tergum III. *Legs:* Not as elongate as in male, hind femora almost reaching apex of abdomen. Abdomen: Broad and deep, 1.8-1.9 times as broad as basal width of pronotum. **GENITALIA:** As in Figs 12-13, with more or less triangular sclerotized rings; posterior wall simple, with minute, hardly visible and evenly distributed rows of spinules (Fig. 16); vestibulum narrow, S-shaped, irregularly sclerotized (Fig. 15).

Distribution: Central Asia (Fig. 41).

Discussion: *Omocoris* was described by LINDBERG (1930) to accommodate a single species *O. parallelus*. Although the tribal affiliation was not discussed in the description, the genus was originally placed in orthotylines. CARVALHO (1952) revealed the close affinity of the genus with *Eurycolpus* and considered the latter to be a senior synonym of *Omocoris*. The generic status of *Omocoris* was subsequently restored by KERZHNER & MUMINOV (1964), who provided diagnoses for both genera based on the vestiture, length of the antennal segment I, degree of the sexual dimorphism, and the male genitalic structures, especially on the number of apical processes of the vesica and the shape of the sensory

lobe of the left paramere. KERZHNER & MUMINOV also synonymized *O. paralellus* with *Oncotylus cunealis* REUTER, 1904 and transferred the latter to *Omocoris*.

*O. erythrophthalmus* is described by CARAPEZZA (1997) on the basis of a male and female collected in Tunisia, and is so far known only from the type series. The species does not fit the diagnosis of *Omocoris* presented above in all respects except in the structure of the pretarsus. The following combination of characters clearly indicates that the placement of *O. erythrophthalmus* in *Omocoris* is unsatisfactory: antennal segment I short, not longer than interocular distance; vestiture and tibial spines pale; the legs comparatively short; the females macropterous; the sensory lobe of the left paramere long, apically pointed. The characters listed above are shared by a number of Palaearctic phyline genera. The species resembles *Eurycolpus* in external appearance and pretarsal structure, but lacks the subapical notch on the claw, a character, according to my observations, shared by all representatives of *Eurycolpus*.

The correct assignment of *O. erythrophthalmus* evidently would not become possible without examination of the vesica, which is missing in the holotype, the only known male specimen (CARAPEZZA 1997). The female genitalia were found to be of no value at the generic level in *Oncotylus*, *Omocoris*, *Eurycolpus*, *Josifovius* and other related genera. Due to these reasons, I herein declare *Omocoris erythrophthalmus* CARAPEZZA, 1997 as a species incertae sedis.

### ***Omocoris cunealis* (REUTER, 1904)**

Figs 1, 2, 8, 10, 12, 23, 41

*Oncotylus cunealis* REUTER, 1904: 7, 14.

*Omocoris paralellus* LINDBERG, 1930: 21 (syn. KERZHNER & MUMINOV, 1964: 46).

*Oncotylista* (nom. nud.) *cunealis* REUTER: KIRITSHENKO, 1959: 108-109

Diagnosis: Easily distinguished from *O. unicolor* by the larger size, reddish cuneus in the male, longer hemelytron in the female always reaching posterior margin of the abdominal tergum III, comparatively robust vesica with the well developed twofold subapical series of teeth, narrow and weakly sclerotized rings of the bursa copulatrix.

Description: **Male:** COLORATION (Fig. 1): Greenish yellow; femora apically with minute pale brown spots or uniformly pale; cuneus and adjacent medioapical margin of corium pale reddish; outer margin of cuneus greenish yellow; membrane uniformly smoky pale brown, sometimes with indistinct brown patches. SURFACE AND VESTITURE: As in generic description. STRUCTURE: Body 4.0 – 4.5 × as long as width of pronotum; total length 5.8-6.8. Head: Elongate; vertex 1.0-1.2 × as wide as eye; antennal segment I 1.0-1.2 × as long as pronotum; antennal segment II 1.3-1.4 × as long as basal width of pronotum, 1.9-2.2 × as long as width of head. Thorax: Pronotum 1.9-2.1 × as wide as long; tarsus and claw as in generic description. GENITALIA: Genital segment, theca and right paramere as in generic diagnosis; left paramere (Fig. 23) almost flat apically

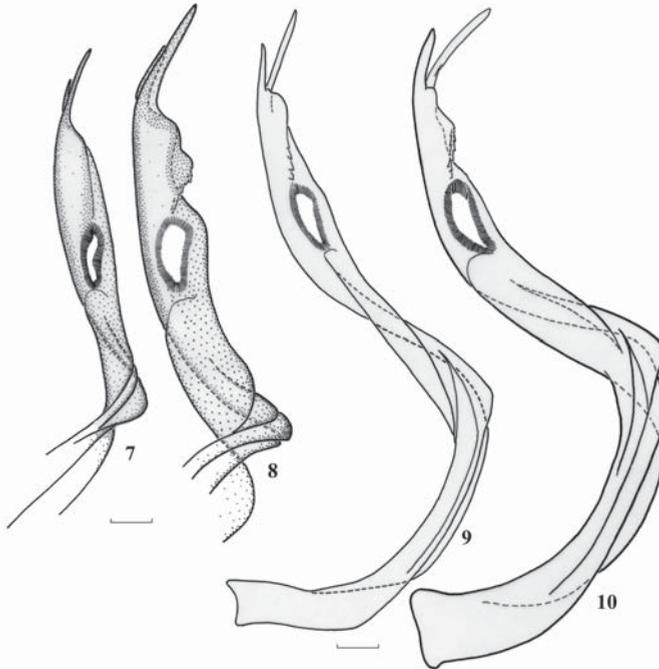
with slightly bifid sensory lobe; vesica larger and more robust than in *O. unicolor*, strongly sclerotized, with well developed, twofold series of spicules running from projection distal to secondary gonopore (Figs 8, 10).

**Female:** Body 4.0-4.4 × as long as width of pronotum; total length 5.0-5.8. **COLORATION:** Uniformly greenish yellow, rarely femora with indistinct minute pale brown spots apically. **SURFACE, VESTITURE AND STRUCTURE:** As in generic description. **Head:** Vertex 1.2-1.5 × as wide as eye; antennal segment I 1.2-1.3 × as long as pronotum; antennal segment II 1.5-1.6 × as long as basal width of pronotum, 1.7-1.9 × as long as width of head. **Thorax:** Pronotum 1.5-1.7 × as wide as long; hemelytra reaching posterior margin of abdominal tergum III (Fig. 2). **GENITALIA:** As in Fig. 12, with weakly sclerotized, narrow, triangular sclerotized rings and narrow, S-shaped vestibulum.

**Host plant:** *O. cunealis* was collected from *Malcolmia* sp. (Brassicaceae), annual, biennial, or perennial herb distributed in Central and South-West Asia, China, and Mediterranean region.

**Distribution:** Known from Iran, Turkmenistan, Tajikistan, and Uzbekistan (Fig. 41).

**Material examined: Holotype of *O. cunealis*: IRAN: Khorasan: Kafar Qal'eh [Kyafirkala] on Gerirud River, E Khorasan, 36.4731°N 60.7553°E, 460 m, 09 Apr**



**Figs 7-10:** Vesica of *Omocoris* spp.: **7-8**, in ventral view: **7** – *O. unicolor* (AMNH\_PBI00149620), **8** – *O. cunealis* (AMNH\_PBI00149561); **9-10**, in lateral view: **9** – *O. unicolor* (AMNH\_PBI00149583), **10** – *O. cunealis* (AMNH\_PBI00149547).

1898, Zarudny, ♂ (AMNH\_PBI 00149514). **TAJIKISTAN:** Daryakul [Dar'ya-Kul'] Lake, left bank of Vakhsh River, 37.31°N 68.50917°E, 21 Mar 1944, A. N. Kiritshenko, 3♂ (AMNH\_PBI 00149516, AMNH\_PBI 00149520-AMNH\_PBI 00149521), 3♀ (AMNH\_PBI 00149515, AMNH\_PBI 00149517-AMNH\_PBI 00149518), 11 larvae (AMNH\_PBI 00149519, AMNH\_PBI 00149522-AMNH\_PBI 00149531); 20 Mar 1944, A. N. Kiritshenko, 2♂ (AMNH\_PBI 00149537, AMNH\_PBI 00149538), 5 larvae (AMNH\_PBI 00149532-AMNH\_PBI 00149536). Peschany Pass, 8 km N Bura-tau, 37.21888°N 68.44277°E, 10 Apr 1948, Shchetkin, 2♂ (AMNH\_PBI 00149551, AMNH\_PBI 00149552), 2♀ (AMNH\_PBI 00149550, AMNH\_PBI 00149553). **TURKMENISTAN:** Foothills 13 km SW Gyzylarbat [Kizyl-Arvat], 38.878°N 56.161°E, 25 Apr 1952, Ilyichev, 1♂ (AMNH\_PBI 00149542). Mts 12 km SW from Gyzylarbat [Kizyl-Arvat], 38.889°N 56.175°E, 29 Apr 1952, Steinberg, 1♂ (AMNH\_PBI 00149541); 22 Apr 1952, K.G. Romadina, 2♂ (AMNH\_PBI 00149539, AMNH\_PBI 00149540). Toutly, 35 km NE of Gyzylarbat, 39.18333°N 56.53333°E, 20 Apr 1952, Ilyichev, 1♂ (AMNH\_PBI 00149544); 20 Apr 1952, K.G. Romadina, 1♂ (AMNH\_PBI 00149543). Uzboy, 25 km W of Yaskhan, 39.681°N 55.282°E, 28 Apr 1952, Slepyan, 3♂ (AMNH\_PBI 00149545-AMNH\_PBI 00149547). **UZBEKISTAN:** 20 km N of Ayakguzhumdy, 40.739°N 63.747°E, 17 Jun 1966, I. M. Kerzhner, *Malcolmia* sp. (Brassicaceae), 22♂ (AMNH\_PBI 00149554-AMNH\_PBI 00149572), 19♀ (AMNH\_PBI 00149554-AMNH\_PBI 00149569, AMNH\_PBI 00149573). Termez [Bukhara mer. = former Bukhara Chanate], 37.21666°N 67.26666°E, Apr 1913, A. N. Kiritshenko, 2♂ (AMNH\_PBI 00149548, AMNH\_PBI 00149549).

***Omocoris unicolor* sp.n.**

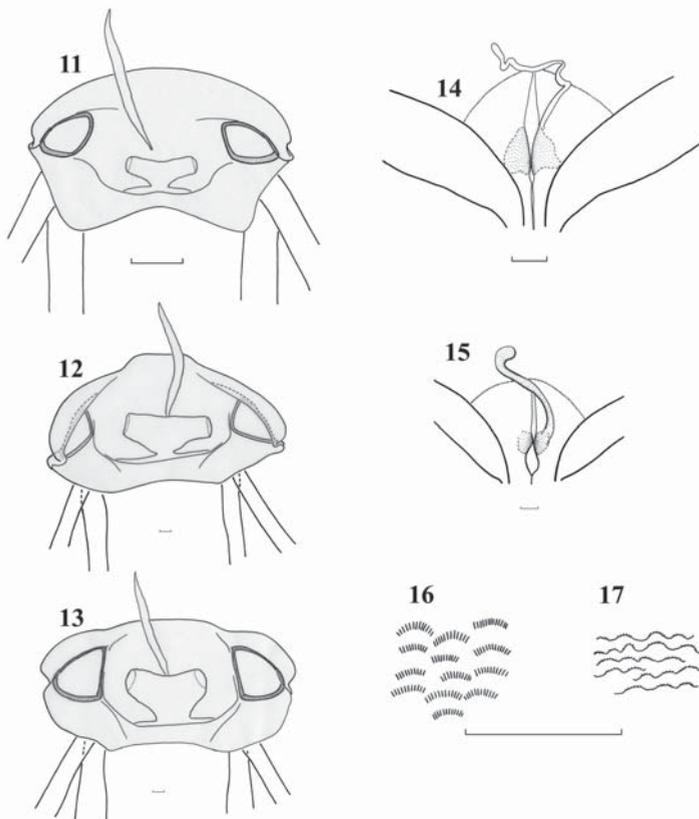
Figs 3, 4, 7, 9, 13, 15, 16, 19, 25-27, 28, 29, 41

Diagnosis: Differs from *O. cunealis* in the smaller size, uniformly pale greenish hemelytron usually with small pale brown spots in male, shorter hemelytron reaching at most posterior margin of the abdominal tergum II in female, thin vesica with a straight and hardly recognizable series of subapical spicules, and broadly rounded sclerotized rings of the bursa copulatrix.

Description: **Male:** COLORATION (Fig. 3): Uniformly pale, greenish yellow; all femora, hemelytra, rarely base of pronotum densely covered with minute rounded pale brown spots; these spots usually more or less reduced on corium; rarely hemelytra uniformly pale; membrane pale, rarely slightly infuscate, outer margin with brown stripe extending from cells to apex of wing. SURFACE AND VESTITURE: As in generic description, but venter of fore coxa with dark spine-like setae in addition to those on antennal segment I and femora. STRUCTURE: Body elongate, parallel sided, 3.7-4.3 × as long as width of pronotum; total length 5.3-5.7. Head: Elongate; vertex 1.10-1.25 × as wide as eye; antennal segment I 0.9-1.0 × as long as pronotum; antennal segment II 1.2-1.3 × as long as basal width of pronotum, 1.55-1.85 × as long as width of head.

Thorax: Pronotum  $1.8-2.1 \times$  as wide as long; tarsus as in Fig. 28, claw as in Fig. 29. GENITALIA: Theca as in Fig. 25; right paramere as in Fig. 26; left paramere (Figs 24, 27) distinctly bifid sensory lobe apically; vesica thin and slightly sclerotized, with single, straight, and in some specimens barely visible series of spicules (Figs 7, 9).

**Female:** Body short,  $3.8-4.3 \times$  as long as width of pronotum; total length 4.5-5.1. COLORATION: As in male, brown spots on hemelytra faint to absent. SURFACE AND VESTITURE: As in generic description. STRUCTURE: Head: Vertex  $1.3-1.5 \times$  as wide as eye; antennal segment I  $0.9-1.1 \times$  as long as pronotum; antennal segment II  $1.2-1.4 \times$  as long as basal width of pronotum,  $1.3-1.6 \times$  as long as width of head. Thorax: Pronotum  $1.6-1.7 \times$  as wide as long; apex of hemelytron rounded, reaching to about posterior margin of abdominal tergum II (Fig. 4). GENITALIA: As in Fig. 13, with well sclerotized and comparatively rounded sclerotized rings, vestibulum as in Fig.



**Figs 11-17:** Female genital structures of *Omocoris* and *Josifovius*: **11-13**, bursa copulatrix and associated structures in dorsal view: **11** – *J. dimorphus* (AMNH\_PBI 00149577), **12** – *O. cunealis* (AMNH\_PBI 00149515), **13** – *O. unicolor* (AMNH\_PBI00149609); **14-15**, vestibulum in anterior view: **14** – *J. dimorphus* (AMNH\_PBI 00149577), **15** – *O. unicolor* (AMNH\_PBI00149585); **16-17**, sculpture of the ventral wall of bursa copulatrix: **16** – *O. unicolor* (AMNH\_PBI00149585), **17** – *J. dimorphus* (AMNH\_PBI 00149577).

15, ventral wall of bursa copulatrix simple, without any armament, with fine sculpture as in Fig 16.

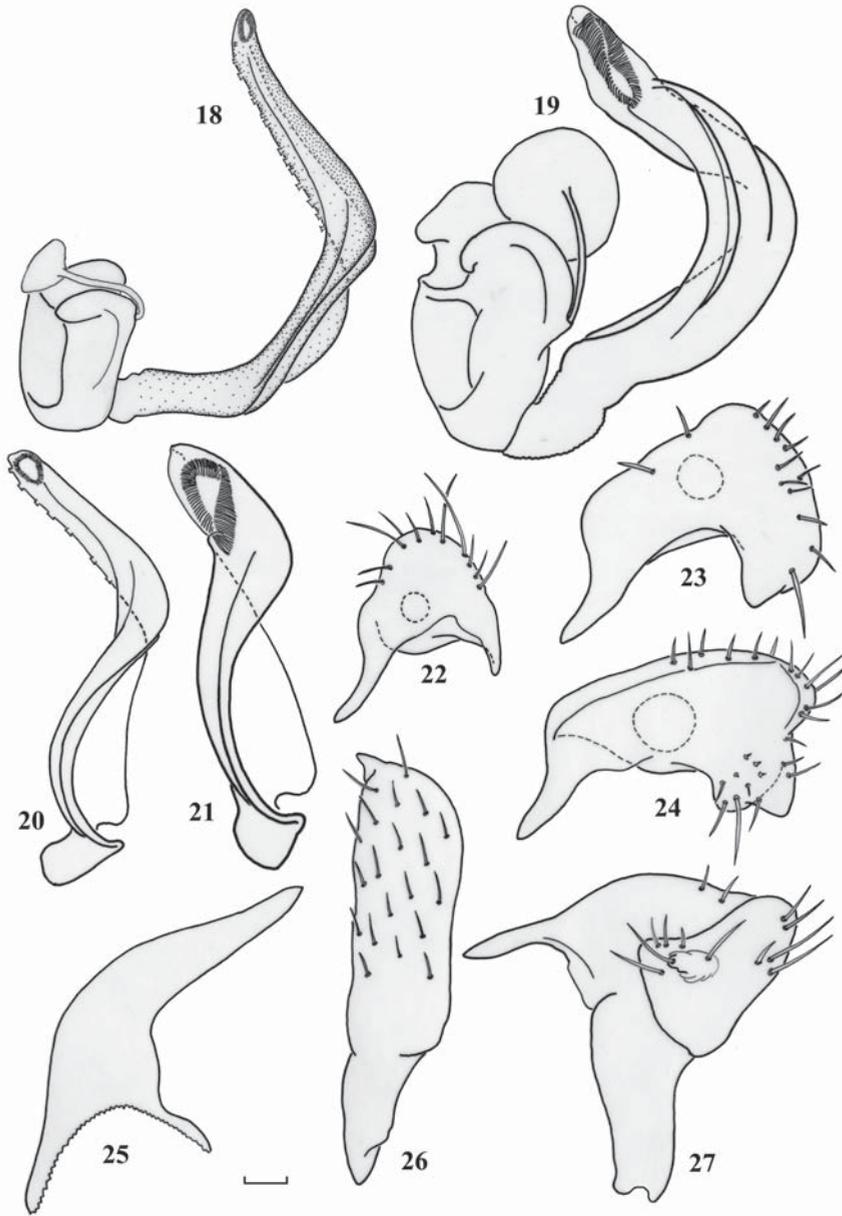
Host plant: Adults and larvae of the species were collected from *Hypecoum pendulum* var. *parviflorum* (KAR. & KIR.) CULLEN (Fumariaceae). This annual herb is known from Central Asia, Turkey, Iran, Afghanistan, and Pakistan. Single occurrence on *Malcolmia* sp. is considered a sitting record.

Distribution: Uzbekistan (Fig. 41).

Etymology: unicolor is the Latin adjective meaning “of a single color”, referring to the absence of contrasting color pattern on the dorsum of this new species.

Material examined: **Holotype: UZBEKISTAN:** Aktau, Tamdytau, 40.739°N 63.747°E, 29 Apr 1966, I. M. Kerzhner, ♂ (AMNH\_PBI 00149622).

**Paratypes: UZBEKISTAN:** 18 km N of Ayakguzhumdy, 40.919°N 63.747°E, 18 Apr 1966, I. M. Kerzhner, *Hypecoum pendulum* var. *parviflorum* (Fumariaceae), 1♀ (AMNH\_PBI 00149589). 20 km E of Dzhankel'dy, 40.85°N 63.573°E, 19 Apr 1966, I. M. Kerzhner, *Malcolmia* sp. (Brassicaceae), 1♂ (AMNH\_PBI 00149582). 20 km N of Ayakguzhumdy, 40.739°N 63.747°E, 17 Jun 1966, I. M. Kerzhner, *Hypecoum pendulum* var. *parviflorum* (Fumariaceae), 8♂ (AMNH\_PBI 00149594-AMNH\_PBI 00149599, AMNH\_PBI 00149601-AMNH\_PBI 00149602), 11♀ (AMNH\_PBI 00149591-AMNH\_PBI 00149592, AMNH\_PBI 00149594-AMNH\_PBI 00149599, AMNH\_PBI 00149601), 2 larvae (AMNH\_PBI 00149593, AMNH\_PBI 00149593). 30 km N of Ayakagytm, 40.935°N 64.498°E, 25 Apr 1966, I. M. Kerzhner, 1♀ (AMNH\_PBI 00149632). Aktau, Tamdytau, 40.739°N 63.747°E, 02 May 1966, G.S. Medvedev, 3♂ (AMNH\_PBI 00149612, AMNH\_PBI 00149620-AMNH\_PBI 00149621); 01 May 1966, G.S. Medvedev, 1♂ (AMNH\_PBI 00149611), 2♀ (AMNH\_PBI 00149609, AMNH\_PBI 00149610); 02 May 1966, I. M. Kerzhner, 10♂ (AMNH\_PBI 00149615, AMNH\_PBI 00149617-AMNH\_PBI 00149619), 6♀ (AMNH\_PBI 00149613-AMNH\_PBI 00149614, AMNH\_PBI 00149616, AMNH\_PBI 00149616, AMNH\_PBI 00149626-AMNH\_PBI 00149627); 29 Apr 1966, I. M. Kerzhner, 3♂ (AMNH\_PBI 00149623-AMNH\_PBI 00149625), 4♀ (AMNH\_PBI 00149628-AMNH\_PBI 00149631). Ayakguzhumdy, E of Dzhankel'dy [Dzhangildy], 40.739°N 63.747°E, 18 Apr 1966, I. M. Kerzhner, 2♂ (AMNH\_PBI 00149583, AMNH\_PBI 00149600), 10♀ (AMNH\_PBI 00149584-AMNH\_PBI 00149588, AMNH\_PBI 00149600), 2 larvae (AMNH\_PBI 00149590, AMNH\_PBI 00149590); 23 Apr 1966, G.S. Medvedev, 4♂ (AMNH\_PBI 00149603-AMNH\_PBI 00149605), 14♀ (AMNH\_PBI 00149603-AMNH\_PBI 00149608). Between Dzhankel'dy and Ayakguzhumdy, 40.792°N 63.529°E, 22 Apr 1966, I. M. Kerzhner, 3♂ (AMNH\_PBI 00149580, AMNH\_PBI 00149581), 3♀ (AMNH\_PBI 00149579, AMNH\_PBI 00149581). Kyzylkum Sands, 10 km SW of Turtkuduk, 40.643°N 64.184°E, 24 Jun 1966, I. M. Kerzhner, 3♂ (AMNH\_PBI 00149636), 3♀ (AMNH\_PBI 00149637). Kyzylkum Sands, Besapan, 41.5°N 64.5°E, 28 Apr 1966, I. M. Kerzhner, 5♂ (AMNH\_PBI 00149634, AMNH\_PBI 00149634, AMNH\_PBI 00149634-AMNH\_PBI 00149635, AMNH\_PBI 00149635), 2♀ (AMNH\_PBI 00149633, AMNH\_PBI 00149635).



**Figs 18-27:** Male genitalia: **18-19**, vesica in lateral view: **18** – *Josifovius dimorphus* (AMNH\_PBI 00149574), **19** – *Dasycapsus cunealis* (AMNH\_PBI 00155719); **20-21**, vesica in ventral view: **20** – *J. dimorphus* (AMNH\_PBI 00149574), **21** – *D. cunealis* (AMNH\_PBI 00155719); **22-24**: left paramere, view in dorsal view: **22** – *J. dimorphus* (AMNH\_PBI 00149574), **23** – *Omocoris cunealis* (AMNH\_PBI 00149547), **24** – *O. unicolor* (AMNH\_PBI 00149583); **25-27**, *O. unicolor* (AMNH\_PBI 00149583): **25** – apex of theca, **26** – right paramere, **27** – left paramere.

*Josifovius* gen. n.

Type species: *Eurycolpus dimorphus* WAGNER, 1961

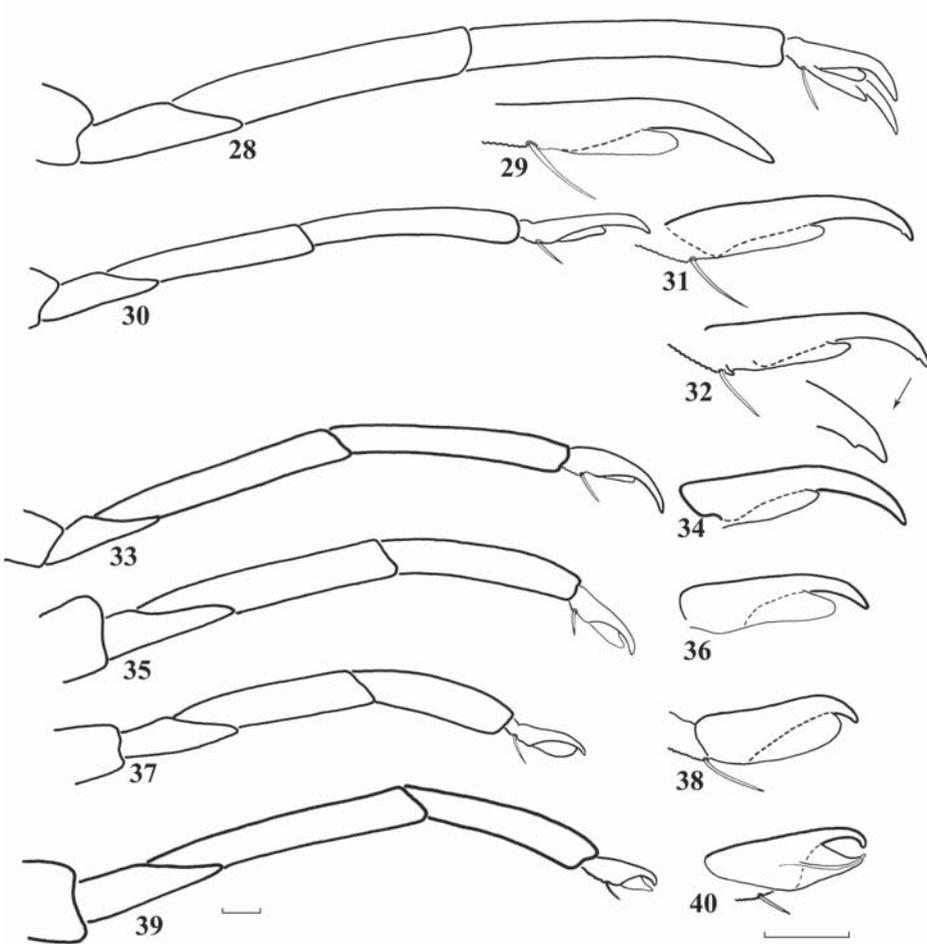
Diagnosis: Recognized by the pale yellow coloration with somewhat darkened claval commissure, simple pale vestiture, dark tibial spines, pulvillus reaching to half the length of the claw and with the extreme apex not attached to the claw, submacropterous female, and J-shaped vesica with a small, apical secondary gonopore and series of square dentations running on the distal half of the vesica. Most similar to *Eurycolpus* REUTER in the color pattern, body proportions, vestiture, and comparatively short rostrum reaching the middle coxae. *Eurycolpus* distinguished from *Josifovius* by the presence of subapical notch on the claw (Figs 30-32), subbrachypterous females, antennal segment I considerably shorter than distance between the eyes, and entirely different, long and thin, usually strongly twisted vesica with a long and gradually tapering apical process and secondary gonopore located far from the apex. The series of peculiar square dentations on the vesica also occur in some *Tinicephalus* FIEBER, 1858 and several clearly unrelated phylines, namely in many species of *Moissonia* REUTER, 1894, *Chrysochnoodes rufus* WAGNER, 1959, and *Megalodactylus macularubra* (MULSANT & REY, 1852). Several species of *Tinicephalus* further resemble *Josifovius* in having submacropterous females, similar coloration, and uniformly pale vestiture. However, the former genus differs from *Josifovius* in the body proportions, vesica with long, typically two or even three lobed apical process, and pretarsus with claw strongly curved apically, pulvillus large, closely adhered to claw with the apex almost reaching tip of claw (Figs 37, 38). The apically located secondary gonopore is reminiscent of two Palaearctic Phylini genera: *Dasycapsus* POPPIUS, 1912 and *Acrotelus* REUTER, 1885. However, both genera have a very short, robust vesica twice as long as the phallobase (Fig. 19), with large secondary gonopore, and a large pulvillus almost reaching the apex of the claw (Figs 35, 36, 39, 40).

Description: **Male:** COLORATION (Fig. 5): Uniformly pale yellow, apex of labium darkened; femora apically with indistinct, small, rounded, pale brown spots, rarely uniformly pale. Outer parts of clavus and corium usually paler, whitish; claval commissure somewhat darkened, saturated yellow to pale brown; membrane whitish, with brown edging along outer cell and brown kidney-shaped spot extending from cells to apex of wing.

SURFACE AND VESTITURE: Dorsum smooth, shining; whole body with silver, adpressed, simple setae; tibial spines dark; antennal segment I with single spine-like setae on medial surface. STRUCTURE: Body elongate, parallel-sided. Head: Short, declivent, weakly projecting beyond anterior margin of eyes; clypeus visible from above; eyes large; antennae relatively long; labium reaching to apex of middle coxae. Thorax: Pronotum trapeziform, with weakly defined calli; metathoracic scent-gland evaporatory area relatively short, oval. *Legs:* Slender; hind femora rather thin and long, surpassing apex of abdomen; tarsal segment II slightly longer than segment III (Fig. 33); claw (Fig. 34) thin, gradually curved; pulvillum flaplike, reaching to half length of claw, with extreme

apex free, not attached to the claw. GENITALIA: Genital segment of moderately size, about 0.3 of abdomen, conical, without distinctive ornamentation; theca L-shaped, of shape typical of many Phylinae, lacking distinctive morphological features; left paramere with gradually tapering sensory lobe and thin, smoothly curved apical process (Fig. 22); right paramere small, typical Phylinae; vesica J-shaped (Figs 18, 20), thin, with a series of square, apically dilative dentations running from middle to apex of vesica; secondary gonopore small, located at extreme apex of vesica, with distinctive ornamentation.

**Female:** COLORATION, SURFACE AND VESTITURE: As in male. STRUCTURE: Body elongate oval, submacropterous. Head: Longer than in male, projecting



**Figs 28-40:** Hind tarsus and pretarsus: 28-29 – *Omocoris unicolor* (AMNH\_PBI 00149583), 30-31 – *Eurycolpus flaveolus* (AMNH\_PBI 00146819), 32 – *E. aureolus* (AMNH\_PBI 00146764), 33-34 – *Josifovius dimorphus* (AMNH\_PBI 00149575), 35-36 – *Dasycapsus cunealis* (AMNH\_PBI 00155719), 37-38 – *Tinicephalus hortulans* (AMNH\_PBI 00154012), 39-40 – *Acrotelus pilosicornis* (AMNH\_PBI 00147807).

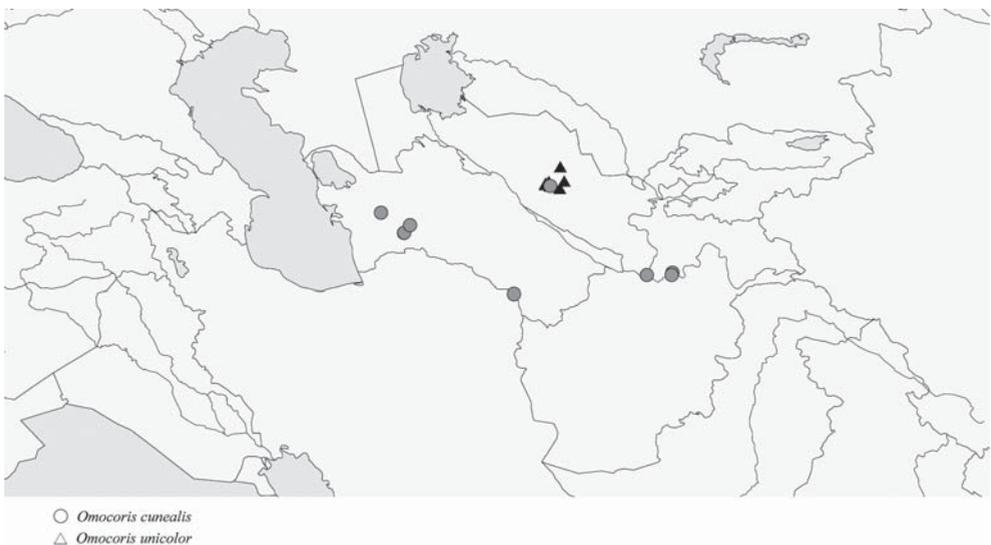
well beyond anterior margin of eyes, with distinctly smaller eyes and more convex frons. Hemelytra submacropterous (Fig. 6), surpassing anterior margin of abdominal tergum VIII; cuneus broadly triangular, with apex reaching middle of abdominal tergum VII. *Legs*: Not as elongate as in male; hind femora not reaching apex of abdomen. Abdomen: Rather broad, 1.5–1.6 times as broad as basal width of pronotum. **GENITALIA**: As in Fig. 11, sclerotized rings rounded, more or less straight medially, posterior wall simple, without any armament, with fine sculpture as in Fig 17, vestibulum long, twisted, narrow and almost entirely membranous (Fig. 14).

*Host plant*: Unknown. According to CARAPEZZA (1997), the species was generally collected by sweeping on Asteraceae in desert habitats.

*Distribution*: Originally described from Egypt and later recorded from Algeria (ECKERLEIN & WAGNER 1965), Libya (ECKERLEIN & WAGNER 1970), Tunisia, and Israel (CARAPEZZA 1997).

*Etymology*: The genus is named after MICHAEL JOSIFOV in recognition of his substantial contributions to our knowledge of heteropteran systematics. The gender is masculine.

*Discussion*: *Eurycolpus dimorphus* WAGNER, 1961 was transferred to *Omocoris* by WAGNER (1975) evidently due to the submacropterous females and the antennal segment I somewhat longer than in *Eurycolpus*. However, in the type species of *Omocoris* females are strongly brachypterous, with fused corium and clavus, and absent cuneus and membrane, while the antennal segment I is much longer than in both sexes of *O. dimorphus*. Combination of other characters, including vestiture, structure of the head, pretarsus, sensory lobe of the left paramere and peculiar vesica also clearly contradicts with the current placement of *O. dimorphus*.



**Fig. 41:** Distribution of *Omocoris* spp.

Based on a preponderance of morphological evidence, I have to conclude that neither *Omocoris*, nor any other phyline genus, can adequately accommodate *O. dimorphus* and the new monotypic genus *Josifovius* is erected to place it.

***Josifovius dimorphus* (WAGNER, 1961) comb. n.**

Figs 5, 6, 11, 14, 17, 18, 20, 22, 33, 34

*Eurycolpus dimorphus* WAGNER, 1961: 318-320

*Omocoris dimorphus*: WAGNER, 1975: 268-269

Diagnosis: Recognized by the characters given in the generic diagnosis.

Description: **Male:** COLORATION, SURFACE, VESTITURE AND GENITALIA: As in generic description. STRUCTURE: Body 4.2-4.4 × as long as width of pronotum; total body length 4.5-4.7. Vertex 1.15-1.20 × as wide as eye; antennal segment I 0.9 × as long as pronotum; antennal segment II 1.5 × as long as basal width of pronotum and 2.0 × as long as width of head; pronotum 2.05 × as wide as long.

**Female:** COLORATION, SURFACE, VESTITURE AND GENITALIA: As in generic description. STRUCTURE: Body 3.6 × as long as width of pronotum; total body length 3.5-3.8. Vertex 1.8-2.1 × as wide as eye; antennal segment I 0.7 × as long as pronotum; antennal segment II 1.1 × as long as basal width of pronotum, 1.4-1.5 × as long as width of head; pronotum 2.0 × as wide as long.

Material examined: **LIBYA:** Kseia, 32.581°N 14.041°E, 02 May 1961 - 03 May 1961, Eckerlein, 2♂ (AMNH\_PBI 00149574, AMNH\_PBI 00149575), 2♀ (AMNH\_PBI 00149576, AMNH\_PBI 00149577).

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## РЕЗЮМЕ

Ревизиран е род *Omocoris* LINDBERG и е описан нов вуг *O. unicolor* sp.n. ом Узбекистан. Описан е новия род *Josifovius*, с тупов вуг *Eurycolpus dimorphus* WAGNER, 1961. *Omocoris*

*erythroptalmus* CARAPEZZA, 1997 се разглежда като species incertae sedis. Представени са илюстрации на мъжките и женски гениталии, тарсуса и претарсуса, фотографии на горзалния хабитус, както и данни за разпространението на видовете и растенията гостопримник.

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