

## Species of the genus *Harpocera* Curt. from the Russian Far East (Heteroptera: Miridae)

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Three species of the Palaearctic genus *Harpocera* Curt. are distributed in the Far East of Russia. *H. koreana* Jos. is recorded from Russia for the first time, the hitherto unknown males of *H. choii* Jos. and *H. koreana* Jos. are described and compared with *H. orientalis* Kerzh. from the Kuril Islands. A key to the three Far Eastern species is given.

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The genus *Harpocera* Curt. (Phylinae) was known from four Mediterranean species: *H. atlantica* Wagn., *H. cyprica* Wagn., *H. hellenica* Reut., and *H. thoracica* Fall. (Wagner, 1974). Later, Josifov (1977) described *H. choii* Jos. and *H. koreana* Jos. from Korea, and Kerzhner (1979), *H. orientalis* Kerzh. from the Kuril Islands. In total, seven species are currently known in this genus (Kerzhner & Josifov, 1999); they live on various species of oak (*Quercus*).

The present paper, based on collections of Zoological Institute RAS (St.Petersburg) and Lazo Nature Reserve (Primorsk Terr.), contains new data on Far Eastern species. *H. koreana* is recorded from Russia for the first time, the hitherto unknown males of *H. choii* and *H. koreana* are described, and a key to the three Far Eastern species is given.

All measurements are in mm.

### Key to Far Eastern species of *Harpocera*

- 1(2). Antennal segment 2 in both sexes black, distinctly swollen at apex, in ♂ 1.29-1.49 times (Fig. 6), in ♀ twice as long as segment 1. Body length: ♂ 6.8-7.0, ♀ 6.4. Vesica, theca and left paramere as in Figs 1-5  
..... **H. choii** Jos.
- 2(1). Antennal segment 2 in ♂ black, in ♀ pale, in ♂ 1.6-2.3 times, in ♀ 3.0-3.8 times as long as segment 1.
- 3(4). Body length: ♂ 5.0-5.8, ♀ 5.4-5.8. Dorsal side in ♀ brown-red. Sides of pronotum in ♀ straight. Antennal segment 2 in ♂ thick, black, slightly clavate at apex (Fig. 11). Antennal segment 1 in ♀ pale, with two large black spots at middle, segment 2 entirely pale. Vesica, theca and left paramere as in Figs 7-10  
..... **H. koreana** Jos.
- 4(3). Body length: ♂ 5.9-6.3, ♀ 6.5-6.8. Dorsal side in ♀ brownish yellow; inner part of corium red or (in dark specimens) reddish. Sides of pronotum in ♀ concave. Antennal segment 2 in ♂ slender, weakly thickened to apex, brown in basal third and black in the rest

part (Fig. 15). Antennal segment 1 in ♀ black, segment 2 with brown apex. Vesica, theca and left paramere as in Figs 12-14 ..... **H. orientalis** Kerzh.

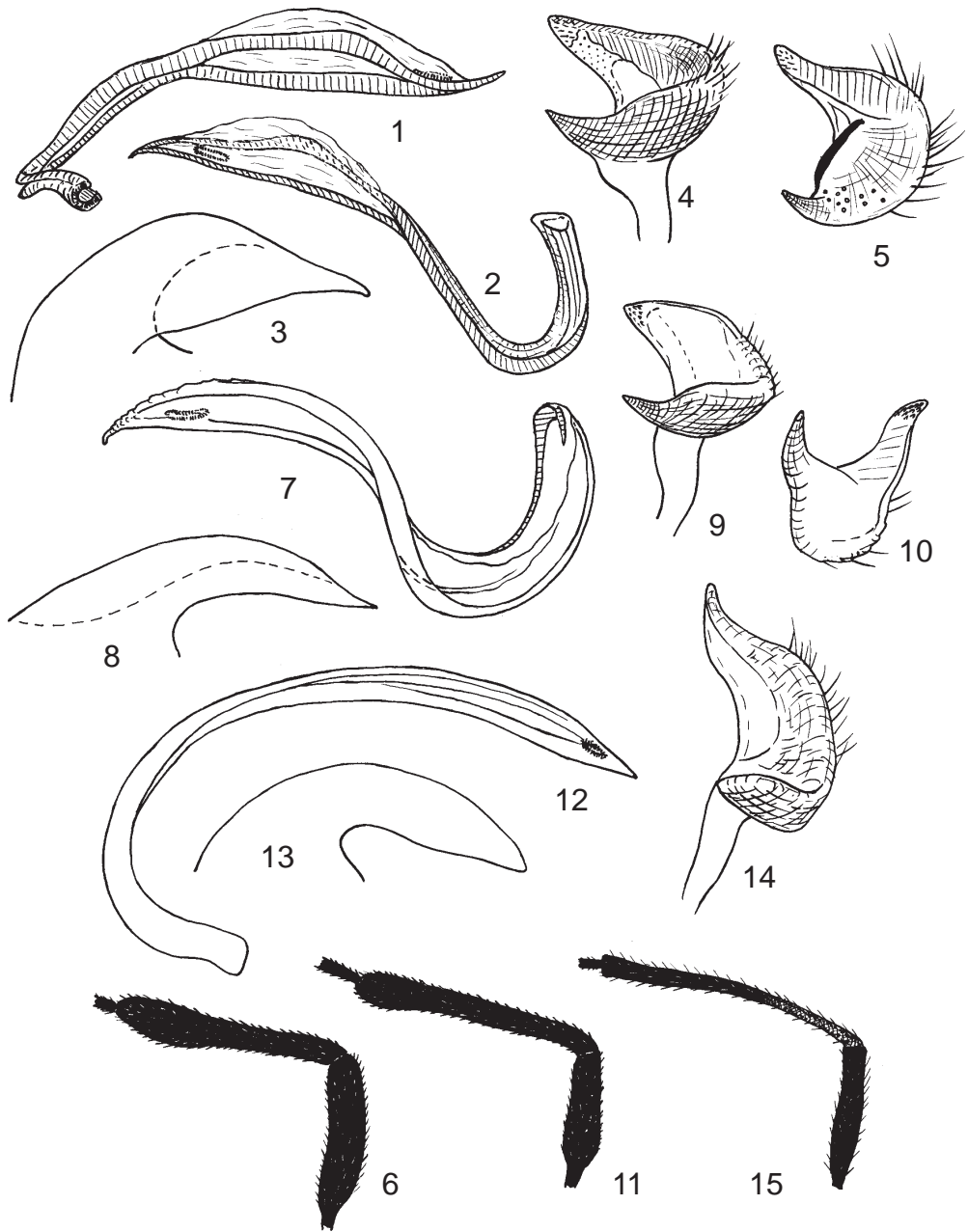
### *Harpocera choii* Josifov, 1977 (Figs 1-6)

*Harpocera choii* Josifov, 1977: 50, Figs 1, 2; Kerzhner, 1988: 841; Kerzhner & Josifov, 1999: 352.

**Material.** **Russia, Primorsk Terr.:** 1 ♀, Khasan Distr., Kravtsovka, 7.VI.1972 (Sukacheva); 1 ♀, Partizansk Distr., Frolovka, 7.VI.1984 (Zhiltzova); 1 ♀, Gorno-taehznaya station, 17-30.V.1989 (Kirejtshuk); 5 ♂, 3 ♀, Lazo Nature Reserve, Proselochnaya Bay, 14-15.VII.2005 (V. Shokhrin).

**Description.** **Male.** Body elongate, 2.6-3.1 times as long as wide, shining. Pronotum and hemelytra with not dense, short, brown hairs.

Head black, shining, with sparse, long, erect hairs. Frons with a narrow yellow stripe widened before clypeus and connecting with a varying in size yellow spot on vertex. Clypeus black, frequently yellow at base and usually with brown or yellow median stripe. Vertex with a strong transverse impression. Eyes large; vertex 1.9-2.5 times as wide as eye. Bucculae yellow. Ventral side of head on both sides with a yellow stripe under eye. Rostrum extending slightly beyond fore coxae; segments 1 and 2 yellow, 3 and 4 black. Antennae black, shining; segments 1 and 2 thick, with sparse erect black bristles and dense recumbent brown hairs (Fig. 6). Antennal segment 2 1.3-1.5 times as long as 1, 1.1-1.3 times as long as width of head, at apex asymmetrically swollen and curved inside. Antennal segments 3 and 4 slender, in their basal part only 0.3 times as thick as segment 1; segment 3 slightly shorter than 2; segment 4 short, sometimes narrowly yellow-brown at apex.



**Figs 1-15.** *Harpocera*. 1-6, *H. choii*; 7-11, *H. koreana*; 12-15, *H. orientalis*. 1, 2, 7, 12, vesica; 3, 8, 13, theca; 4, 5, 9, 10, 14, left paramere laterally and dorsally; 6, 11, 15, antennal segments 1 and 2.

Pronotum long, black, with weakly concave sides and strongly concave hind margin, with transverse furrow behind calli and fine transverse wrinkles behind this furrow. Calli prominent, smooth. Stripe on fore margin, stripe between calli extending to middle of pronotum, narrow

edgings on hind margin and sides yellow. Ventral side of thorax black, prothorax margined with yellow ventrally and dorsally. Scutellum finely transversely striate, black, with yellow apex and percurrent indistinct narrow brown-yellow median stripe.

Hemelytra long, extending far beyond apex of abdomen, rugged. Clavus and endocorium brown-black. Exocorium sometimes with narrow dirty yellow stripe along radial vein. Cuneus black with white base. Membrane brown; veins dark brown.

Coxae yellow. Femora yellow; fore and middle femora in apical half with dense, sometimes confluent, brown dots; hind femora black in distal half. Tibiae with black bristles arising from small black spots, their outer side at base with dark stripe; fore and middle tibiae dirty yellow; hind tibiae dark brown. Abdomen yellow, but two first visible segments and ventral side of connexivum black. Genital segment long, compressed laterally, black, with coarse erect hairs in apical part. Vesica, theca and left paramere as in Figs 1-5.

Head width 1.03-1.10; vertex width 0.50-0.57; length of antennal segments (1-4) 0.8-0.9, 1.1-1.2, 0.9-1.1, 0.7-0.8; pronotum width 1.9-2.1.

Body length 6.8-7, width 2.3-2.6.

### ***Harpocera koreana* Josifov** (Figs 7-11)

*Harpocera koreana* Josifov, 1977: 51, Fig. 3); Kerzhner & Josifov, 1999: 352.

**Material.** **Russia, Primorsk Terr.:** 1 ♂, Gorno-taezhnaya station, 17-30.V.1989 (Kirejtshuk); 8 ♂, 2 ♀, Lazo Nature Reserve, Proselochnaya Bay, 4-9.VI.2005 (Yu. and L. Sundukov). **North Korea:** 3 ♀, Bagion, 29 km nördl. Kesong, 29.V.1987 (M. Josifov).

**Description. Male.** Body black, elongate, 2.7-3.1 times as long as wide. Pronotum and hemelytra with short adpressed pale hairs.

Head black, strongly shining, with long, erect, brown hairs. Frons with a narrow median yellow stripe bifurcated anteriorly and running here along sides of clypeus. Vertex with transverse impression and with varying in size yellow spot on hind margin, 1.9-2.1 times as wide as eye. Clypeus black laterally, yellow to black. Clypeus black, with brown or yellow median stripe. Ventral side of head black. Bucculae yellow. Rostrum yellow; apical segment black. Antennae black, segments 1 and 2 thick, with black erect bristles and semierect brown hairs (Fig. 11). Antennal segment 2 1.6-1.8 times as long as segment 1, 1.0-1.2 times as long as width of head, at apex slightly clavate and curved inside. Segments 3 and 4 with short erect and semierect hairs.

Pronotum wrinkled, moderately shining, with weakly concave sides and concave hind margin, black or rarely black-brown. Spot of variable shape on fore margin of pronotum, stripe between calli (absent in dark specimens), usually also narrow edging on hind margin yellow. Scutellum black, with convex basal part, laterally with yellow stripes.

Hemelytra long, extending beyond apex of abdomen. Clavus greyish brown in fore half and dark brown in hind half. Corium greyish brown at base and dark brown at middle. Cuneus brown-black, with large pale spot at base. In dark specimens, pale pattern reduced, distinct only at base of hemelytra. Membrane greyish brown, with dirty yellow-brown veins. Usually, membrane (in both sexes!) with two elongate red spots: a larger one at middle near external vein and a smaller in basal part of the cell. These spots are purplish in pale specimens and dark red in dark specimens; in some specimens from Korea (3 ♀ examined), the smaller spot absent. Vesica, theca and left paramere as in Figs 7-10.

Head width 0.92-1.00; vertex width 0.47-0.50; length of antennal segments (1-4) 0.6-0.7, 1.0-1.1, 0.7-0.9, 0.5; pronotum width 1-1.2.

Body length 5-5.8, width 1.8-2.

### ***Harpocera orientalis* Kerzhner** (Figs 12-15)

*Harpocera orientalis* Kerzhner, 1979: 41, Figs 100-108; 1988: 842; Kerzhner & Josifov, 1999: 352.

**Material.** **Russia, Sakhalin Prov.:** about 150 specimens from Kunashir Island.

**Distribution and mode of life.** Kurile Islands (Kunashir) and Japan (Hokkaido). On male inflorescences of *Quercus crispula* and *Q. dentata*.

**Comparison.** *H. orientalis* is similar to *H. koreana*, but can be readily distinguished by larger size of both sexes. It differs from both Far Eastern mainland species in the long and slender antennal segment 2 of male (Fig. 15), distinctly concave sides of pronotum, C-shaped vesica (Fig. 12) (vs. S-shaped in *H. choii* and *H. koreana*), theca with parallel margins in basal half (Fig. 13) and strongly protruded dorso-ventrally left paramere (Fig. 12).

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