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A NEW SPECIES OF THE GENUS *SPHINCTUS* (HYMENOPTERA: ICHNEUMONIDAE) FROM THE RUSSIAN FAR EAST

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Summary. *Sphinctus pereponicus* Humala, sp. n. is described by a single female from Khasan District of the Primorsky Krai. The new species easily differs from other representatives of the genus by its abundant yellow pattern, entirely yellow face, reduced carination of propodeum and a large number of flagellomeres in antennae.

Key words: parasitoid wasps, Sphinctini, taxonomy, new species, Primorsky Krai, Russia, East Palaearctic.

А. Э. Хумала Новый вид рода *Sphinctus* (Нимфалоиды: Ichneumonidae) с Дальнего Востока России // Дальневосточный энтомолог. 2020. N 413. С. 20-24.

Резюме. Из Хасанского района Приморского края по единственной самке описан *Sphinctus pereponicus* Humala, sp. n. Новый вид легко отличается от других представителей рода преобладанием желтой окраски тела, полностью желтым лицом и большим числом сегментов в жгутике усика.

INTRODUCTION

The small genus *Sphinctus* Gravenhorst, 1829 is considered within subfamily Tryphoninae in the tribe Sphinctini. Altogether 16 species are known: *S. serotinus* Gravenhorst, 1829 from Europe, *S. gastoni* Gauld, 1997 from the Neotropics, while other 14 species occur in the Eastern Palaearctic and Oriental regions (Yu *et al.*, 2016). According to the recent data (Khaim *et al.*, 2019) six *Sphinctus* species were recorded from Russia: one from the European part of the country and five species from the Russian Far East (Kasparyan, 1992; Kasparyan & Tolkanitz, 1999; Kasparyan & Khaim, 2007; Kasparyan *et al.*, 2012). The representatives of this genus are known as parasitoids of Limacodidae and Lasiocampidae (Lepidoptera). All known species are found in late summer-early autumn.

MATERIAL AND METHODS

The material for the present study was obtained during a field excursion to the Vityaz Bay (Primorsky Krai) for collecting insects after the IV Eurasian Symposium on Hymenoptera held at September 9–15, 2019 in Vladivostok.

Photographs of the type specimen were taken at the Forest Research Institute KRC RAS with a DFC 290 digital camera attached to a Leica MZ9.5 stereomicroscope. Multifocus-images were combined with Helicon Focus Pro software.

The morphological terminology generally follows Gauld (1991), except for the terms ‘temple’ for the upper part of the gena, between the eye and the occipital carina and ‘nervellus’ for the combined hind wing veins Cu and cu-a. The material on the *Sphinctus* species have been deposited in the following collections: Zoological Institute of Russian Academy of Sciences, St Petersburg, Russia (ZISP) and Forest Research Institute, Karelian Research Centre of Russian Academy of Sciences, Petrozavodsk, Russia (FRI). The holotype of new species is stored at the Zoological Institute of Russian Academy of Sciences, St Petersburg, Russia.

TAXONOMY

Subfamily Tryphoninae Shuckard, 1840

Tribe Sphinctini Förster, 1868

NOTES. The monotypic tribe includes only one genus *Sphinctus*, its Russian fauna was revised by Kasparyan (Kasparyan & Tolkanitz, 1999) where a key to species was provided.

Genus *Sphinctus* Gravenhorst, 1829

Type species: *Sphinctus serotinus* Gravenhorst, 1829.

Sphinctus pereponicus Humala, sp. n.

<http://zoobank.org/NomenclaturalActs/70678408-65FC-4EB7-96AA-D4B1D462010E>

Figs 1–5

TYPE MATERIAL. Holotype – ♀, **Russia**: Primorsky Krai., Khasan District, Gamov Cape, Vityaz Bay, 42.596° N, 131.189° E, 13.IX 2019, A. Humala leg. (ZISP).

DESCRIPTION. Female. Body length 13 mm, fore wing 11.4 mm, hind wing 7.5 mm.

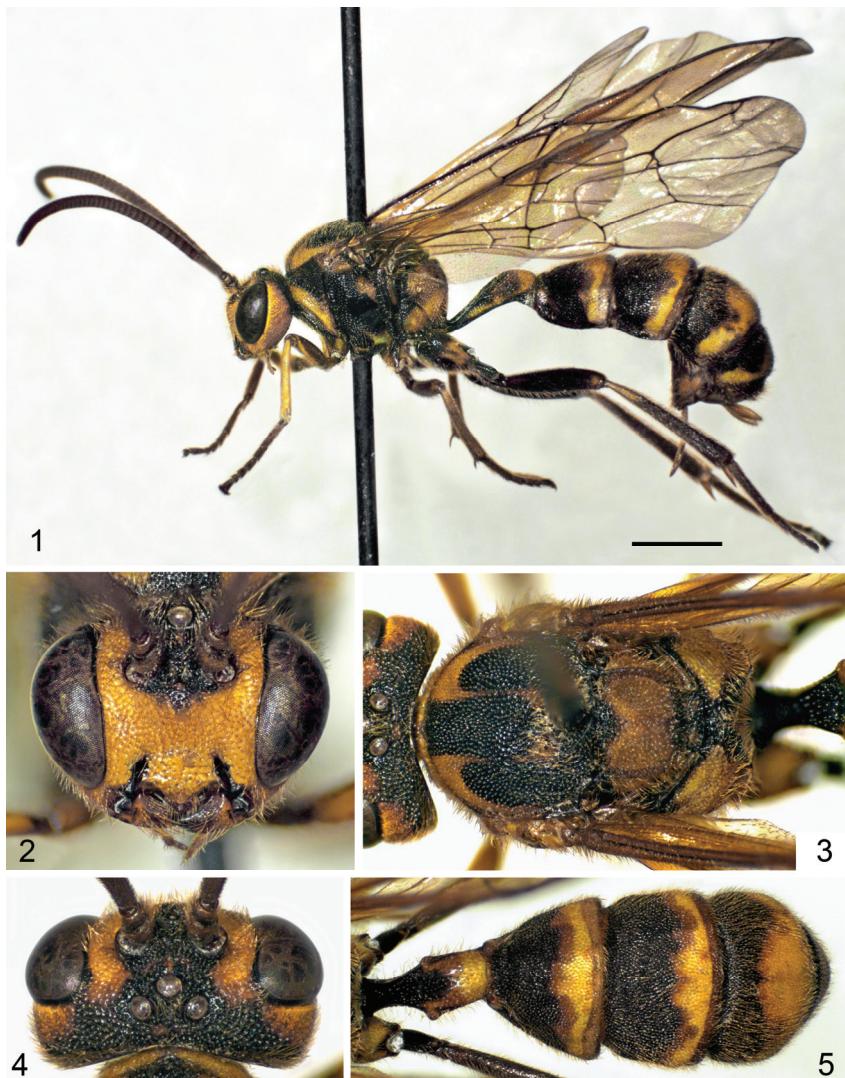
Head 1.3 times as wide as high; face transverse, at level of antennal sockets about 2.5 times as wide as high. Antenna comparatively short and stout with 41 flagellomeres; basal flagellomere 2.6 times as long as wide, second flagellomere 1.2 times as long as wide; from 7th flagellomere – transverse. Malar space about 0.5 times as long as basal width of mandible; ocelli forming an obtuse triangle; lateral ocellus separated from eye by distance 2.3 times as long as its maximum diameter; the distance between lateral ocelli 1.5 times as long as maximum diameter of lateral ocellus; temple well developed, 0.7 times as wide as eye. Occipital carina complete, hypostomal carina connected to occipital carina at a distance from mandible approximately equal to its base width. Clypeus flat, slightly separated from face, its lower edge with a median tooth, laterally bounded by oblique depressions directed to the anterior tentorial pits.

Mandibles relatively short, narrowed to apex with lower tooth much smaller than upper one. Base of mandible with sharp transverse impression. Except at the base, the mandibles bear large, deep punctures and from the middle to the apex, are covered with long, fulvous hair.

Mesosoma short and rounded, 1.2 times as long as high; notauli not developed; pronotum with numerous short transverse ribs in the depression along lower margin, epomia lacking; epicnemial carina developed in lower third of mesopleuron and does not reach its front margin. Scutellum large and flat with slightly rounded lateral carinae well developed along its whole length, postscutellum coarsely sculptured, also with lateral carinae; sternaulus indistinct, short and shallow; speculum large, polished. Propodeum short, with large apical area delimited by well developed lateromedian longitudinal carinae; area basalis and area superomedia fused and short, hardly delimited; costulae reduced, lateral longitudinal carinae lacking except for posterior portions.

Wings. Areolet small, petiolate, nearly triangular, vein 2m-cu connected to areolet almost in its outer corner. Vein cu-a postfurcal. Hind wing with nervellus (cu-a) broken in lower third.

Legs. Hind femur 4.2 times as long as high. Hind tibia 1.4 times as long as hind femur, with single flattened spur and spine-like setae; basitarsus 0.45 times as long as hind tibia and about as long as tarsomeres 2–5 altogether. Claws small and pectinate.



Figs 1–5. *Sphinctus pereponicus* Humala, sp. n., ♀, holotype: 1 – habitus, lateral view; 2 – head, frontal view; 3 – mesosoma, dorsal view; 4 – head, dorsal view; 5 – metasoma, dorsal view. Scale bar for Fig. 1 = 2.0 mm.

Metasoma. Tergite 1 with basolateral protrusions and median longitudinal depression, spiracles beyond its middle, but the precise location uncertain, since the left and right spiracles are asymmetrically located due to malformation; dorsal carinae lacking; dorsolateral carinae developed in basal 0.6, somewhat extending beyond spiracles. Sternite 1 transversely striate, more coarsely in apical half. Tergite 2 expanded, 0.7 times as long as apically broad. Tergites 2–5 strongly convex; tergites 3–5 constricted anteriorly and strongly impressed along lateral margin; epipleures of tergites 2–4 sharply delimited by folds. Ovipositor slightly downcurved, its sheaths leaf-like, densely setose.

Entire body coarsely and densely punctured and covered with dense fulvous hairs.

Colour. Black; yellow: face entirely; clypeus, excluding apical edge and lateral stripes connected to base of mandibles with anterior tentorial pits; malar space, palps, temple widely; frontal orbits; lower pronotum and dorsolateral corner of pronotum; ‘shoulder-stripes’ on mesoscutum, originating antero-laterally and extending along notaular lines; tegula; scutellum except for posterior margin; axilla; subalar prominence; base of wings; markings on mesopleuron above speculum and on mesosternum; upper mesepimeron; propodeum excluding small basal patches dorsally and laterally; most of metapleuron; most of fore and mid coxae, hind coxa posteriorly, fore tibia; lateral surface of first tergite; postpetiole; tergites 1–5 subapically. Transitional zones between black and yellow pattern of metasomal tergites diffusely reddish-brown; narrow posterior margins of tergites 2–6 and hypopygium yellowish brown. Flagellum reddish-brown; mandibles yellowish-red with dark brown teeth. Femora of fore and mid legs yellowish-brown with yellow dorsal stripe, tarsal segments 4–5 of fore and middle legs dark brown. Hind femur dark brown excluding yellowish apex; hind tibia fuscous except basal 0.25 yellowish, tarsus dark brown. Ovipositor sheaths testaceous. Wings evenly infumate, vein brown, pterostigma honey-yellowish.

Male. Unknown.

DIAGNOSIS. The new species is similar to *Sphinctus nigrithorax* Uchida, 1931 by the absence of dorsal longitudinal keels on the first tergite, by black tergites 2–4 with large yellow median spot in front of a brownish posterior margin, and by comparatively strongly infumated wings, but differs from it in the slightly impressed apical area of propodeum (in *S. nigrithorax*, face is mostly black with inner orbits yellow; apical area of propodeum strongly impressed). From *S. chinensis* Uchida, 1930 and the European *S. serotinus* Gravenhorst, 1829, in which dorsal longitudinal keels of first tergite well developed and tergites 2–3 of female predominantly yellow or red, the new species differs in the absence of dorsal longitudinal keels on first tergite, larger number of flagellomeres in antennae and female tergites 2–3 mostly black with yellow apical margins. The new species differs from mostly black *S. ater* Sheng, 2009, *S. melanius* Sheng et Sun, 2014, *S. specularis* Kasparyan, 1992, and *S. vitripennis* Kasparyan, 1992 in the abundant yellow pattern of mesosoma and metasoma. From *S. tobiasi* Kasparyan, 1992, having sessile areolet, hyaline wings and entirely black pronotum, the new species differs in the petiolate areolet, infumate wings and pronotum with abundant yellow pattern. From *S. submarginalis* Uchida, 1940 the new species differs in moderately infumate wings (strongly infumate in *S. submarginalis*) and reduced propodeum carination. Unlike in *S. carinatus* Sheng et Sun, 2014, *S. rufiventris* Meyer, 1930 and *S. trichiosoma* (Cameron, 1899) with a predominantly red metasoma, the metasomal tergites in the new species are black with wide yellow apical margins. *S. pereponicus* sp. n. differs from all other known Palaearctic congeners in the abundant yellow pattern of the body and entirely yellow face, antennae with 41 flagellomeres; propodeum carination considerably reduced: costulae absent, only pleural carinae and apical portions of lateromedian longitudinal carinae and lateral longitudinal carinae are developed.

DISTRIBUTION. Russia: south part of Primorsky Krai.

ETYMOLOGY. Derived from “Pereponia” – an unofficial name of the Eurasian Symposium on Hymenoptera originated from the Russian “Перепончатокрылые” – Hymenoptera.

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