TWO NEW SPECIES OF *PHORA* (DIPT., PHORIDAE) FROM TAJIKISTAN AND INDIA

BY M.B MOSTOVSKI

While revising the genus *Phora* from the Palaearctic Region I found two unusual specimens that look very similar to *Phora nipponica* Gotô (1986). Both come from Tajikistan, and proved to belong to a separate species, which seems to be closely related to Gotô's species from Honshu and Hokkaido. Dr R.H.L. Disney kindly passed me another specimen, from northern India. It represents yet another new species, which belongs to the same cluster of species. The close affinity of *nipponica*, *tajicola* sp.n., and *himachalensis* sp.n. is supported by the similar shape of the epandrium, including the very distinctive lateral lobe of the right side of the epandrium, and similar shape of the so-called right surstylus (see Mostovski & Disney, in press). In all these species, the left side of the epandrium is not cleft. The variably developed posterodorsal lobe is connected to the rest of the epandrium by a membranous area, which may be nearly indiscernible as in *P. himachalensis* sp.n. In the latter case the epandrium looks completely undivided. This condition may represent an initial step towards the deeper cleavage of the left side of the epandrium. A similar condition may be observed in the *stictica* group of species, which includes *stictica* Meigen itself, *hyperborea* Schmitz, *velutina* Meigen, and *horrida* Schmitz.

The number of anterior bristles on the mid tibiae is apparently more variable within *Phora* species than has been previously appreciated; therefore I put the new species near *nipponica*, although the latter has only a single anterior bristle.

The terminology of the hypopygium structures follows mainly Gotô (1984), with some exceptions (Mostovski & Disney, in press). The material studied is housed in the Zoological Institute, St Petersburg (ZIN) and the University Museum of Zoology, Cambridge (UMZC).

Phora nipponica Gotô

Phora nipponica Gotô, 1986: 131.

The distribution of this species seems to be restricted to the Far East, where it is found in Japan (Gotô, 1986), Maritime Province (Michailovskaya, 1999), and Kamchatka (new record).

Material studied. 1♂ RUSSIA, Kamchatka, 20km N of Kozyrevsk, 21.vii.1985 (*Kasparyan*) (ZIN).

Phora himachalensis sp.n.

(Figs 1, 2)

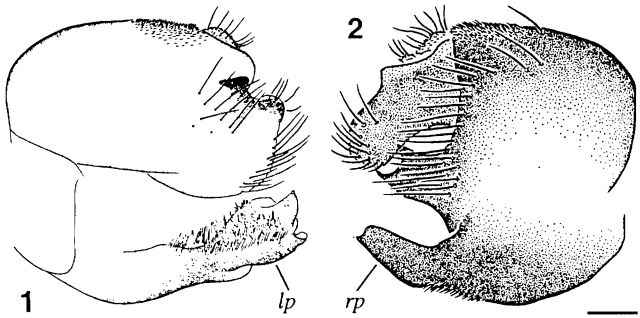
Male. Head. Frons parallel-sided. Antennae and palpi dark.

Legs entirely brown except for fore tibiae and basitarsi, which are yellowish brown. Mid

tibiae with 2–3 anterior bristles and 6–7 dorsal bristles. Hind tibiae with a single bristle. Basal projection of hind femora weakly developed, almost indiscernible. Hind femora with 6–7 tiny hooked hair-like spines on inner surface at base.

Wing membrane translucent, pale yellowish, area between thick veins and at wing base distinctly yellow. Thick veins brown, thin veins pale brown. Five bristles on axillary ridge. Wing length 2.61mm. Costal index 0.49. Costal sections ratio 0.9 : 1.

Left side of epandrium not divided, although posterodorsal portion of epandrium more developed and forms distinctive but rather narrow lobe (fig. 1). Heavily sclerotised elaboration directed inwardly situated just below this lobe. Posteroventral corner of left side of epandrium broad, with bristles at posterior margin. Several longish bristles developed at the base of sclerotised elaboration on inner side of posterior margin of epandrium. Right epandrial lobe somewhat curved upwards, with deeply concave posterior margin, which is smooth and has no additional denticles (fig. 2). Strong and well developed bristles present in posterior and posterodorsal portions of right side of epandrium. Right surstylus rather broad at base, then narrowed gradually, although its dorsal margin extends suddenly at midlength. Long robust bristles confined to apical portion of right surstylus. Left process of right hypandrial lobe massive, generally straight, and just slightly broadened distally, with thorn-like process apically. Numerous longish hairs form dorsolateral patch in distal half. Right process of right hypandrial lobe simple, just slightly narrowed distally, with short fine hairs at base.



Figs 1–2. — *Phora himachalensis* sp.n. male, hypopygium: 1, left face; 2, right face. Abbreviations: *lp* – left process of right hypandrial lobe; *rp* – right process of right hypandrial lobe. (Scale bar = 0.1mm.)

Holotype ♂: INDIA, Himachal Pradesh, Saichu Tuan Nalla Sanctuary, 9000' alt., 32°50'N 77°E, 20–23.ix.1986 (*A. Hutchings*) (UMZC).

Paratypes. 3♂♂, same data as holotype except one deposited in the Zoological Museum, Moscow.

This species differs from *P. nipponica* in the rather broad posteroventral corner of the left side of the epandrium, the massive left process of the right hypandrial lobe, which is densely covered with longish hairs, in the more deeply excavated right epandrial lobe, and some other details of the hypopygium. In *P. himachalensis* sp.n., the costal index is remarkably less than in *nipponica*, but the first costal section is longer.

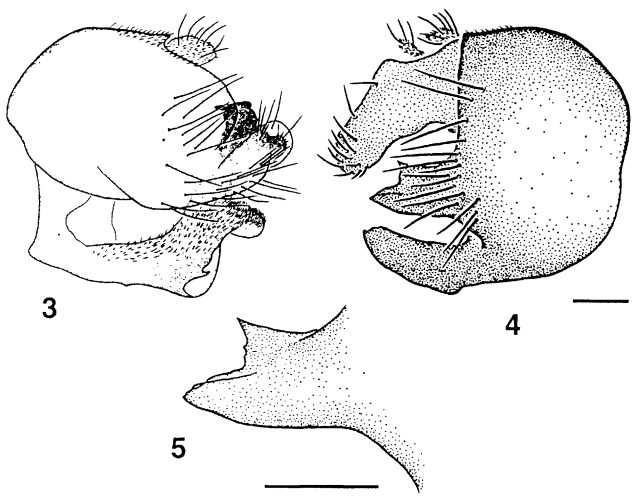
Phora tajicola sp.n.
(Figs 3–5)

Male. Head. Frons parallel-sided. Antennae and palpi dark.

Legs totally brown except for tibiae and two basal tarsomeres in front legs, which are yellowish brown. Mid tibiae with 0–2 anteror bristles apart from 3–5 dorsal bristles. Hind tibiae with a single anterior bristle. Basal projection of hind femur weakly developed, nearly indistinct. Hind femora with 3–4 fine hair-like spines on inner surface at base.

Wing membrane clear, veins brown to yellowish brown. Six to nine bristles on axillary ridge. Wing length 2.35–2.5mm. Costal index 0.5–0.51. Costal sections ratio 0.8–0.83 : 1.

Left side of epandrium not divided, posterodorsal part forms rather broad lobe (fig. 3). Well sclerotised elaboration developed on inner side of posterior portion of epandrium. Short spinules and a single bristle present at base of this elaboration, i.e. on inner side of posterior margin of epandrium. Posteroventral corner of left side of epandrium not developed as broad lobe, bearing long bristles. Right epandrial lobe curved upwards (fig. 4), with deeply excavated posterior margin, which is irregular at higher magnification (fig. 5). Strong and well developed bristles present only in posterior portion of right side of epandrium. Right surstylus broad at base, then narrowed gradually, with sinuous ventral margin and dorsal margin extending suddenly at midlength. Apical part of right surstylus with strong moderately long bristles. Occasional bristles present at posterodorsal margin. Left process of right hypandrial lobe well developed and curved upwards, gradually widened distally, its most apical portion membranous. Short hairs cover dorsolateral surface of this process, with tuft of fine hairs in most distal part. Right process of right hypandrial lobe simple, just slightly narrowed distally.



Figs 3–5. — *Phora tajicola* sp.n. male, hypopygium: 3, left face; 4, right face; 5, right epandrial lobe. (Scale bars = 0.1mm.)

Holotype ♂: TAJIKISTAN, Gafilabad, upper reaches of the Luchob River, 2800m alt., 25.viii.1949 (*Gussakovskij*) (ZIN).

Paratype ♂, as holotype (ZIN).

This species differs from *P. nipponica* mainly in the general shape of the left process of the right hypandrial lobe, which is broader and has developed membranous apical portion. Additionally, the costal index is somewhat less in *P. tajicola* sp.n.

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[Entomologists in this field may also like to read Drs Martin Hall and Sarah Donovan's article on this subject (2001, *Biologist*, **48**(6): 249–253).]

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