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A NEW SPECIES OF *LIMNOPHORA* ROBINEAU-DESVOIDY (DIPTERA, MUSCIDAE) FROM THAILAND

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A new species *Limnophora ponti* sp. n. is described from Thailand. A setulose anepimeron, katepimeron and meron easily separate new species from all other described species of the genus *Limnophora*.

KEY WORDS: Diptera, Muscidae, new species, Thailand.

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Из Таиланда описан новый вид *Limnophora ponti* sp. n. Наличие волосков на анэпимероне, катэпимероне и мероне позволяют легко отличить новый вид от других представителей рода *Limnophora*.

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INTRODUCTION

During several expeditions to Thailand, I collected a new muscid species with problematic generic attribution, which is described below. It is placed in the genus *Limnophora* Robineau-Desvoidy, 1830 the reason for which is discussed below under "diagnosis". I hope that future molecular genetic investigations will help to clarify the generic position of this new species.

The morphological terminology follows McAlpine (1981), except that "postpedicel" is used for antennal flagellomere 1 (3rd antennal segment).

The holotype and paratypes of the new species are deposited in the Zoological Museum of the Moscow State University (ZMUM).

***Limnophora ponti* Vikhrev, sp. n.**

Figs 1, 2

MATERIAL. Holotype – ♂, Thailand, Phuket prov., forest stream, 08.043°N, 98.278°E, 27.II 2009, N.Vikhrev. Paratypes: 10 ♂, 13 ♀, Thailand, Phuket prov., forest stream, 08.043°N 98.278°E, 24-27.II 2009, N.Vikhrev; 9 ♂, 17 ♀, Thailand, Chonburi prov., Chan Ta Then waterfall, 13.242°N, 101.045°E, 14.XII 2007 and 03.II 2009, N.Vikhrev.

DESCRIPTION. MALE. Body length 4.4-4.8 mm, wing length 3.9-4.3 mm. Ground color dark with grey pollinosity.

Head. Eyes bare, separated at narrowest point (at middle) by 0.15 of head width or by almost 2.5 width of postpedicel, frons widened both towards vertex and towards lunula. Frontal vitta black, ocellar triangle short, indistinct in anterior part; fronto-orbital plate and parafacial narrow, 1/2 as wide as postpedicel, dark in frontal view, grayish dusted in posterior view. Face, gena and occiput dark grey dusted; gena very narrow, only half as wide as postpedicel. Fronto-orbital plate with 10 inclinate frontals and 2 reclinate orbitals and a few proclinate hairs in upper half, inner verticals present, outer verticals indistinct. Antenna inserted nearly at middle of head, black, postpedicel 3-3.5 times as long as wide, pedicel with 2 strong dorsal setae, arista with combined plumosity as long as width of postpedicel. Proboscis black, shining. Palpus black, half as wide as postpedicel.

Thorax grey dusted with 2 transverse blackish bands. Presutural band separated into 2 brown spots defined by acrostichals, postpronotal lobe and posterior *prst dc*. Postsutural band extending from suture to slightly beyond level of 3rd *post dc*, narrowed laterally, its posterior median margin shifting in dorsal view. Scutellum with a transverse black band in basal 2/3. Pleura densely grey dusted. Anterior spiracle whitish. Prosternum strongly broadened anteriorly, setulose on lateral margin. *ac* 0+1, presutural *ac* hairs long, in 4 rows, outer rows separated from each other by twice the distance separating them from *dc*. *dc* 2+4, all distinct, two posterior pairs strong. *pp* 2, *ph* 1, *ps* 1, *ia* 1, *pa* 2, *sa* 1, *nt* 2, katapisternals 1+2. Anepimeron with 4-7 setulae above posterior katapisternal (in “Lispe-position”), katepimeron with 2-4 hairs, meron with 2-4 hairs above hind coxa. Scutellum with 1 basal and 1 apical seta.

Wings hyaline, slightly brownish; *R*₁ bare, *R*₄₊₅ with 2-4 setulae on both sides at base. Veins *R*₄₊₅ and *M* slightly converging at apex. Calypters creamy-white, haltere yellow.

Legs black. *f1* with a single submedian *a*-seta and with the usual complete rows of *pd*, *p* and *pv* setae, *pv* row the longest, setae in each row subequal. *t1* without setae apart from preapical *d* and apical *pv* (one male has a long *p*-seta on *t1*). *f2*: 2 *pd* preapicals, hairs on *p* and *a* surfaces dense and elongated, especially *a*-hairs in basal 1/2 and *p*-hairs in apical 1/4. *t2* with 2 *p*-setae in basal and apical 1/3 (3 males



Fig.1. *Linnophora ponti* sp. n., male and female.



Fig. 2. *Linnophora ponti* sp. n.: a – male terminalia, lateral view, b – cercal plate dorsally (from two slightly different angles of view), c – sternite 5.

with 3 *p* on one leg each) and with apical *ad* (short), *pd* (medium), *av* and *pv* (long). *f3* with 4-5 long *av* in apical 2/5, complete row of *ad* and 1 *pd* preapical. *t3* chaetotaxy rather variable, 1(2) strong submedian *ad*, 1-2 weak submedian setae in *a*-position, 6-9 long *av* on median 1/3 to apical 1/2, these *av* setae usually organized in 3-4 pairs with first seta in more *a* and second seta in more *v* positions, but in some specimens placed in a “normal” row of *av* setae, *d* preapical and *av* apical setae strong, *ad* apical shorter than tibial width. Tarsi unmodified.

Abdomen densely yellowish-grey dusted, with 2 pairs of distinct subtriangular black spots on tergites 1+2 to 4, these spots divided by a wide dusted median vitta with more whitish pollinosity (in posterior view), tergite 5 without paired black spots, but with a dark median vitta. Tergite 5 with 4(3-5) strong marginal setae, these setae on dark basal points. Sternite 1 with several irregularly placed fine setulae. Male terminalia characteristic: sternite 5 on posterior margin with a pair of clusters of spine-like setae; cercal plate deeply bifurcated, so cerci connected by narrow bridge only; cerci curved at apical part (Fig. 2).

FEMALE. Body length 4.7-5.5 mm, wing length 4.5-5.1 mm. Ground colour as in male, but pollinosity denser and black spots with less strong shifting tendency.

Frons most narrow at vertex where it is 0.35 of head width, distinctly widened to lunula. Fronto-orbital plate distinctly widened to lunula, with complete outer row of proclinate setulae, inner vertical strong, outer vertical present. Gena and parafacial distinctly wider than in male, 1.5 times as wide as width of postpedicel. Antennae inserted distinctly above middle of head.

Hairs on mesonotum and pleura shorter than in male, scutellum with a transverse black band at most in basal 1/2.

Legs with denser grey pollinosity. *f2* without dense hairs on *p* and *a* surfaces, but elongated *p*-hairs in apical 1/4 present and more distinct, and the elongated *a*-hairs in basal 1/2 turning into a row of setae that ends with a strong median *a*-seta. *f3* with only 3(4) *av*, *t3* with 1 *ad* and with 2-5 *av*.

Abdomen with a median vitta with pollinosity not whitish in posterior view. Strong setae on tergite 5 in discal, not marginal position. Apex of abdomen narrowed.

DIAGNOSIS. The setulose anepimeron, katepimeron and meron above hind coxa and submedian *a*-seta on *fl* easily separate both male and female of *L. ponti* sp. n. from all other species of *Limnophora*.

A more difficult problem with this fly is the genus to which it should be assigned. Formally (in a typological sense) it should form a new genus between *Lispe* Latreille, 1796 (setulose anepimeron) and *Limnophora* (other characters, including typical habitats and biology). I finally came to the decision to place it in *Limnophora* because of its very close resemblance to *Limnophora furcicerca* Xue & Liu, 1991 with which it shares many features, including the characteristic and very similar male genitalia (Fig. 3) but not the setulose anepimeron, katepimeron and meron above hind coxa. *L. ponti* sp. n. keyed to *L. furcicerca* Xue & Liu in the key given for Chinese species of *Limnophora* by Zhang & Xue (1996) because of: 2+4 *dc*; scutal patterns (2 presutural black spots and postsutural black transverse band); frons width about 1/5 of head width; sternite 1 setulose (the hairs are fine, but the key by Zhang & Xue leads to *L. furcicerca* also if the couplet "sternite 1 bare" is chosen); arisal hairs about half as long as postpedicel width; *t3* with more than 1 *av*, sternite 5 posteriorly with a pair of characteristic clusters of spine-like setae. The following key couplet will separate males of *ponti* and *furcicerca*:

- 1(2) Anepimeron, katepimeron and meron above hind coxa setulose; *fl* with submedian *a*-seta, *t3* with 6-9 *a-av* setae *L. ponti* sp. n.
2(1) Anepimeron, katepimeron and meron above hind coxa bare; *fl* without submedian *a*-seta, *t3* with 2-4 *av* setae *L. furcicerca* Xue et Liu

BIOLOGY. *Limnophora ponti* sp. n. was found on boulders in forest streams, and sometimes also on leaves and sand. According to my observations at the Chan Ta Then stream, Chonburi province, made over several years, *L. ponti* sp. n. appears in the early dry season. The dry season here usually starts in December, so in February this stream has almost completely dried up. Under wetter conditions, I

collected on boulders in the Chan Ta Then stream *Heliographa ceylanica* Emden, 1965 (Emden, 1965), and under drier conditions *L. ponti* sp. n., but remarkably never both species at the same time: 24 November 2006 – *H. ceylanica*; 14 December 2007 (dry year) – *L. ponti* sp. n.; 4, 14 December 2008 (wet year) – *H. ceylanica*; 3 February 2009 – *L. ponti* sp. n.

The collecting sites of *L. ponti* sp. n., the Chan Ta Then stream and the nameless stream on Phuket Island, both have their headwaters in low hills, so that both streams are temporary ones, completely or almost completely drying up seasonally.

ETYMOLOGY. Named in honour of Dr Adrian C. Pont.

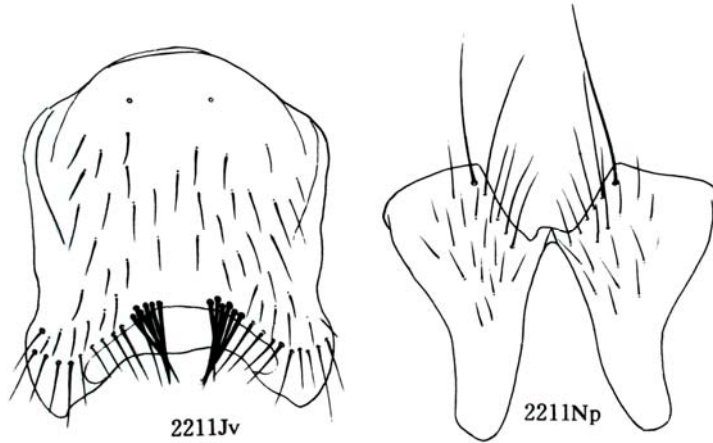


Fig. 3. *Limnophora furcicerca* Xue et Lui (after Xue & Chao, 1998): 2211Jv – male sternite 5, 2211Np – cercal plate.

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