

A new genus and three new species of the family Sepsidae (Diptera) from China and Vietnam

Новый род и три новых вида семейства Sepsidae (Diptera) из Китая и Вьетнама

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КЛЮЧЕВЫЕ СЛОВА: Diptera, Sepsidae, *Aristina*, новый род, новый вид, Китай, Вьетнам.

ABSTRACT. A new genus, *Aristina* gen.n. (type-species: *Aristina dolichoptera* sp. n.) and 3 new species: *Aristina dolichoptera* sp.n., *Sepsis chinensis* sp.n. from China and *Mucha plumosa* sp.n. from Vietnam are described.

РЕЗЮМЕ. Описаны новый род — *Aristina* gen.n. (type-species: *Aristina dolichoptera* sp.n.) и 3 новых вида: *Aristina dolichoptera* sp.n., *Sepsis chinensis* sp.n. из Китая и *Mucha plumosa* sp.n. из Вьетнама.

Introduction

New species, the descriptions of which are given below, were collected in the North of Vietnam (*Mucha plumosa* sp.n.) and in southern provinces of China — Sichuan and Yunnan (*Aristina dolichoptera* gen. et sp.n. and *Sepsis chinensis* sp.n.). These mountain territories are still studied insufficiently and is characterized by high degree of endemism. According to Iwasa [2011] almost all endemic to Vietnam or neighbouring areas (10 from 11 species) were recorded in mountains in the North of the country.

Terminology follows McAlpine [1981] and Cumming et al. [2009]. The following abbreviations are used for depositories of the studied specimens: ZISP — Zoological Institute of Russian Academy of Sciences, St.-Petersburg, Russia; ZMUM — Zoological Museum, Moscow State University, Russia. Other abbreviations used: *a* — anterior; *d* — dorsal; *p* — posterior; *v* — ventral; and combinations of these latter four, all used for leg chaetotaxy; *bm* — basal medial cell of wing; *br* — basal radial cell of wing.

Descriptions of new taxons

Aristina gen.n.

Gender: feminine.

Type-species: *Aristina dolichoptera* sp.n.

DIAGNOSIS. Head roundish. Frons bare, without hairs. Occipital sclerite with several setae. Arista with very short rays; longest rays not longer than greatest diameter of arista. Chaetotaxy: 3 orbitals (of them central strong only), 1 ocellar, 1 frontal, 1 postocellar, 1 inner vertical, 1 outer vertical; 1 short vibrissa.

Scutum with 1 postpronotal, 2 notopleural, 1 supraalar, 2 postalar, and 1+3 dorsocentral setae. Anepisternum with 2–3 setae near posterior margin. Katepisternum with 1 seta in upper posterior corner. Mediotergite greyish microtomentose. Postmetacoxal (=postcoxal, met-epimeral) bridge absent. Scutellum convex on dorsal surface, without hairs; with well-developed basal and apical pairs of strong setae.

Coxa of midleg with seta in upper half.

Wing longer than abdomen. Cells of wing *bm* and *br* separate. Anal vein ending before wing margin. Alula entirely covered with microtrichia; width of alula approximately 2 times as long as wide cell *bm*. Margin of upper calypter with hairs, margin of lower calypter without hairs.

COMPARISON. The new genus belongs to the group of palaeartic and oriental genera of Sepsinae, which have a seta on midcoxa (*Nemopoda* Robineau-Desvoidy, 1830, *Saltella* Robineau-Desvoidy, 1830, *Susanomira* Pont, 1987, *Themira* Robineau-Desvoidy, 1830, *Zuskamira* Pont, 1987), but easily differs from them by the presence of very short rays on arista. Arista of species of abovementioned genera is bare.

Aristina dolichoptera sp.n.

Figs 1–2.

MATERIAL. Holotype ♀, CHINA: Sichuan, SW Mianning Town (28 15 19N, 101 43 42E), 3960 m, 09.07.2011, leg. Belousov, Kabak (ZMUM). Paratype ♀, CHINA: Yunnan, Ailaoshan Mt. Range W Shuitangzhen Town (24 08 31N, 101 23 52E), 2555 m, 04.06.2011, leg. Belousov, Kabak (ZMUM).

DESCRIPTION. FEMALE (Fig. 1). Length of body 4.8–5.0 mm, length of wing 5.5–6.2 mm.



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Figs 1–2. *Aristina dolichoptera* sp.n., ♀ holotype: 1 — imago, lateral view; 2 — antenna.

Рис. 1–2. *Aristina dolichoptera* sp.n., ♀ голотип: 1 — имаго, сбоку; 2 — антенна.

Head slightly higher than long. Eye rounded. Frons, face, gena and lower half of postcranium yellow, matt. Height of gena below eye approximately 1/5 times as long as vertical diameter of eye. Postcranium in upper half and ocellar triangle black, with whitish microtrichia. Occipital sclerite with several setae. 3 orbitals (of them central strong only), 1 ocellar, 1 frontal, 1 postocellar, 1 inner vertical, 1 outer vertical setae present; 1 short vibrissa. Scapus and pedicel brownish, postpedicel black. Postpedicel rounded apically, approximately 2 times as long as wide. Arista with very short rays (Fig. 2); longest rays not longer than greatest diameter of arista.

Thorax black, part around anterior thoracic spiracle yellowish, completely greyish microtrichose. Scutum with 1 postpronotal, 2 notopleural, 1 supra-alar, 2 postalar, and 1+3 dorsocentral setae. Anepisternum with 2–3 setae near posterior margin. Katepisternum with 1 seta in upper posterior corner. Postmetacoxal (=postcoxal, metepimeral) bridge absent. Scutellum convex on dorsal surface, without hairs; with well-developed basal and apical pairs of strong setae.

Legs yellow, only mid- and hindfemora apically with wide black ring and tarsi of hind leg blackish. Coxa of foreleg simple, with 1 apical *d*. Forefemur with 1–2 *pd* in apical third and row of *av* spinules. Midcoxa with a seta in upper half. Midfemur and all tibiae simple without setae. Hindfemur with 1 *ad* in apical half.

Wing longer than abdomen, slightly brownish, with large black spot at apex of R_{2+3} ; veins blackish. Cells of wing *bm* and *br* separate. Anal vein ending before wing margin. Alula entirely covered with microtrichia; width of alula approximately 2 times as long as wide cell *bm*. Margin of upper calypter with hairs, margin of lower calypter without hairs. Halter white.

Abdomen shining, without striking setae.

Male unknown.

DISTRIBUTION. China: Sichuan, Yunnan.

Sepsis chinensis sp.n.

Figs 3–5.

MATERIAL. Holotype ♂, CHINA: Yunnan, Ailaoshan Mt. Range W Shuitangzhen Town (24 08 31N, 101 23 52E), 2555 m, 04.06.2011, leg. Belousov, Kabak (ZMUM).



Figs 3–7. *Sepsis chinensis* sp.n., ♂ holotype (3–5) and *Mucha plumosa* sp.n., ♂ holotype (6–7): 3 — right foreleg, posterior view; 4 — epandrium and surstyli, lateral view; 5 — same, dorsal view, 6 — left foreleg, anterior view; 7 — antenna.
 Рис. 3–7. *Sepsis chinensis* sp.n., ♂ голотип (3–5) и *Mucha plumosa* sp.n., ♂ голотип (6–7): 3 — правая передняя нога, сзади; 4 — эпандрий и сурстили, сбоку; 5 — то же, сверху; 6 — левая передняя нога, спереди; 7 — антенна.

DESCRIPTION. MALE. Length of body 3.4 mm, length of wing 2.7 mm.

Head in lateral view slightly dorsoventrally flattened. Eye roundish. Frons dark brown, shining. Face and gena yellow. Postcranium black, microtrichose. Antenna blackish, postpedicel yellowish inside. Postpedicel in profile oval, slightly longer than wide. Arista bare. 1 ocellar, 1 postocellar, 1 inner vertical, 1 outer vertical setae present; 3 vibrissae. Occipital sclerite with several setulae.

Thorax black. Scutum microtrichose. Proepisternum, proepimeron, anepisternum shining. Katepisternum densely microtrichose, with shining spot anteriorly. Anepimeron shining; pleural wing process greyish microtrichose. Katepimeron, meron, metepisternum and metepimeron completely densely microtrichose. Katatergite and anatergite with dense grey microtrichia. Mediotergite shining under scutellum. Scutum with 1 postpronotal, 2 notopleural, 1 supra-alar, 1 postalar, and 2 postsutural dorsocentral setae; 1 anepisternal (near posterior margin) seta present. Postmetacoxal (=postcoxal, metepimeral) bridge absent. Scutellum with pair of well-developed apical setae and pair of basal setulae.

Legs black. Coxa of foreleg simple. Foreleg as in Fig. 3. Midcoxa with a row of short hairs in upper half. Midfemur simple. Midtibia with 1 *av* in apical third and apicals *av* and *pv*. Hindfemur simple. Hindtibia with 1 *av* in apical third and preapical *d*, with a hardly visible osmeterium-like area anterodorsally.

Wing normal, longer than abdomen, clear, with blackish spot at apex of R_{2+3} ; veins blackish. Cells *bm* and *br* separate. Alula entirely covered with microtrichia, its width approximately 1.5 times as long as width of cell *bm*. Calypteres white, margins darkened. Margin of upper calypter with hairs, margin of lower calypter without hairs. Halter white.

Abdomen black, shining, only slightly constricted after syntergite 1+2. Syntergite 1+2 and rest tergites without striking setae. Surstyli symmetrical (Figs 4, 5), fused to epandrium; epandrium in inside with spur near base of surstylus (Fig. 5).

Female unknow.

COMPARISON. The new species is similar to *Sepsis flavimana* Meigen, 1826, but differs from it by more simple male forefemur (Fig. 3) and by the presence of epandrial spur near base of surstylus (Fig. 5).

DISTRIBUTION. China: Yunnan.

Mucha plumosa sp.n.

Figs 6–7.

MATERIAL. Holotype ♂, VIETNAM: Tam Dao, pr. Vinh Phu, 1000 m, forest, 15.XI.1990, Belokobylskij (ZISP).

DESCRIPTION. MALE. Length of body 2.8 mm, length of wing 2.3 mm.

Head in lateral view dorsoventrally flattened. Eye roundish. Frons dark brown, shining. Face and gena dark brown; face with well-developed fascial carina. Postcranium dark brown, microtrichose. Occipital scler-

ite with several setulae. Antenna brown. Postpedicel elongate and pubescent, approximately 3 times as long as width. Arista plumose: with short rays dorsally and ventrally (Fig. 7). 1 ocellar, 1 postocellar, 1 inner vertical, 1 outer vertical setae present; 1 vibrissa and 1 subvibrissa.

Thorax dark brown. Scutum microtrichose. Proepisternum and proepimeron microtrichose. Anepisternum shining. Katepisternum shining anteriorly and microtrichose posteriorly. Anepimeron, pleural wing process, katepimeron, meron, metepisternum, metepimeron, katatergite and anatergite microtrichose. Mediotergite shining under scutellum. Postmetacoxal (=postcoxal, metepimeral) bridge present. Scutum with 1 postpronotal, 2 notopleural, 1 supra-alar, 1 postalar, and 2 postsutural dorsocentral setae; 1 anepisternal (near posterior margin) seta present. Scutellum with pair of well-developed apical setae.

Legs dark yellow. Coxa of foreleg simple, with 1 apical anterodorsal seta. Foreleg as in Fig. 6. Midcoxa bare. Mid- and hindlegs without striking setae. Hindtibia with osmeterium-like area in apical half anterodorsally.

Wing normal, longer than abdomen, clear, without blackish spots; veins blackish. Cells *bm* and *br* separate. Alula linear, entirely covered with microtrichia. Calypteres, including margins, yellowish. Margin of upper calypter with hairs, margin of lower calypter without hairs. Halter yellowish.

Abdomen shining, strong constricted after syntergite 1+2. Syntergite 1+2 at sides with striking seta. Surstyli symmetrical, fused to epandrium, typical for species of genus *Mucha*.

Female unknow.

COMPARISON. A new described species can be easily distinguished from two other species of *Mucha*: *M. tzokotucha* Ozerov, 1992 and *M. rectotibialis* Iwasa, 2012, by the presence of short rays on ventral side of arista (Fig. 7). *M. tzokotucha* and *M. rectotibialis* has pectinate arista with dorsal rays only.

DISTRIBUTION. Vietnam.

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References

- Iwasa M., Thinh T.H. 2012. Taxonomic and faunistic studies of the Sepsidae (Diptera) from Vietnam, with descriptions of six new species // Entomological Science. Vol.15. P.99–114.
- McAlpine J.F. 1981. Morphology and terminology-adults // McAlpine J.F., Peterson B.V., Shewell G.E., Teskey H.J., Vokeroth J.R., Wood D.M. (coordinators). Manual of Nearctic Diptera. Vol.1. Research Branch, Agriculture Canada. Monograph 27. Ottawa. P.9–63.
- White I.M., Headrick D.H., Norrbom A.L., Carroll L.E. 1999. 33 Glossary // Aluja M. and Norrbom A.L. (eds.). Fruit flies (Tephritidae): Phylogeny and Evolution of Behavior. Boca Raton, FL: CRC Press. P.881–924.