A STUDY OF PHLEBOTOMINE SANDFLIES (DIPTERA: PSYCHODIDAE) IN YUNNAN PROVINCE, CHINA. *SERGENTOMYIA (SERGENTOMYIA) WANGI* N. SP.

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Summary :

Among the phlebotomine sandflies collected in a lime-stone cave of 21°42'N, 10°23'E and 700 m above sea level on 14th August, Mengyuan, Mengla County, Xishuangbanna District, Yunnan Province, two males of the group *fallax* of subgenus *Sergentomyia* are quite different in morphology with those hitherto recorded in the literature. In the present paper its morphology is described with seven figures and the name *Sergentomyia wangi* is proposed in honor of professor Chao-Tsun Wang for his contribution in study and control of leishmaniasis in China.

KEY WORDS : taxonomy, Diptera, Psychodidae, *Sergentomyia wangi* n. sp., China.

Résumé : ÉTUDE SUR LES PHLÉBOTOMES (DIPTERA: PSYCHODIDAE) DE LA PROVINCE DE YUNNAN EN CHINE. *SERGENTOMYIA (SERGENTOMYIA) WANGI* N. SP.

Parmi les phlébotomes récoltés dans une grotte calcaire (21°42'N, 10°23'E) à 700 m au-dessus du niveau de la mer le 14 août (Conté Mengyuan, Mengla, District de Xishuangbanna, Province du Yunnan), deux mâles du sous-genre *Sergentomyia* (groupe *fallax*) se sont avérés différents de ceux connus jusqu'ici dans la littérature. Le présent article décrit la morphologie de *Sergentomyia wangi*. Le nom est proposé en l'honneur du Professeur Chao-Tsun Wang pour sa contribution dans l'étude et le contrôle des leishmanioses en Chine.

MOTS CLÉS : taxonomie, Diptera, Psychodidae, *Sergentomyia wangi* n. sp., Chine.

SERGENTOMYIA (SERGENTOMYIA) *WANGI* N. SP.

Holotype: natural lime-stone cave of 21°42'N, 101°23'E and 700 m above the sea level, at Mengyuan, Mengla County Xishuangbanna District, Yunnan Province. Preserved in the Department of Medical Parasitology, Faculty of Medicine, Jinan University, Guangzhou 510632 China. Collector: Dr. HE, Ming Sheng.

Paratype: same as the holotype.

Unit for measurement: micrometer = μ m.

Specimen measured: two males.

MALE

Wing (Fig. 1): narrow, 1575 (1550-1599) long, 455 (426-484) wide, $L/W = 3.43$ (3.22-3.64); $\alpha = 176$ (172-180), $\beta = 402$ (394-410), $\gamma = 271$ (238-303), $\delta = 70$ (49-90), $\pi = 78$ (66-90), index (α/β) = 0.45 (0.42-0.47), $\alpha/\beta + \gamma < 0.26$ (0.24-0.28), α and β are long which makes the index and $\alpha/\beta + \gamma < 0.5$.

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Antenna (Fig. 2): A3 long 208 (205-210), A4 long 117 (116-117), $c/b = 0.29$ (0.26-0.31), $A4 \approx A5$. Ascoid formula = 1/3-15 (A14-16 lost).

Labrum (Fig. 3): length 203 (201-205), $A3/L = 1.02$ (1.00-1.04), Labral sensilla (Lewis, 1978): apical 6, subapical 4, adoral 9, cibarial 4.

Palp (Fig. 4): length 525, $P1 = 41$, formula = 1,2,(4,3),5, relative length = 100:289:310:298:422, segment 3 $\approx$ Segment 4 (100:104). Spatulate sensilla about 6-8 over 0.30-0.44 at segment 3 from the base.

Cibarium (Fig. 5): arch incomplete. A medium size pigment patch in special morphology, with a breadth of 26-27, about 0.56 (0.55-0.57) the inner-diameter of cibarium (47). Cibarial armature: hind teeth with two rows of medium-sized triangular teeth of which 21 in front row and 12 in back row; the teeth in back row is longer than that of front row and the central ones are wider and longer than the lateral ones. 4-5 small point teeth formed the fore teeth, which is occasionally appeared in the middle of cibarium.

Pharynx (Fig. 6): 129 (127-131) long, 27 (25-29) wide, $L/B = 4.8$ (4.5-5.1). Armature occupied posterior 1/4 of pharynx and consists of broad scales with serration at posterior border.

Male genitalia (Fig. 7): Coxite 240 (236-244) long. Style 108 (103-113) long, bearing four spines, two terminal, two subterminal, accessory spine at about 0.68-0.70 from base, coxite/style = 2.23 (2.09-2.37), > 2 . Paramere 191 long, hooked, coxite/paramere = 1.24. Aedeagus

Figs 1-7. — *Sergentomyia wangi* n. sp. 1. Male wing; 2. Antenna; 3. Labrum (labral sensilla): Ap = apical, Sap = subapical, Ado = adoral, Cib = cibarial; 4. Palp: S. Spatulate sensilla; 5. Cibarium: Cp = cibarial patch; 6. Pharynx; 7. Male genitalia.

107 (105-109) long, bilaterally smooth, paramere/aedeagus = 1.81. Genital filament 385 (357-412) long, genital pump 81 (65-96) long, filament/pump = 4.75 (3.72-6.34). Surstyle 193 (185-201), shorter than coxite, coxite/surstyle = 1.25 (1.17-1.32).

Taxonomic accordance: *Sergentomyia wangi* belongs to the subgenus *Sergentomyia* Franca & Parrot (1920) as with hairs on abdominal tergites 2-6 recumbent, cibarial pigment patch present, cibarial armature with parallel fore and hind rows of teeth. $A3 < A4 + A5$, wing index (α/β) < 0.5, aedeagus stout, style with four spines: two terminal and two subterminal. The following characteristics define *S. wangi* to group *fallax* (Theodor, 1958): with narrow wings, $A3 < A4 + A5$, $A3/L \approx 1$. And the morphology of cibarium described for *S. wangi* is characteristic to other members in group *fallax* hitherto recorded in the literature.

There were two species of *fallax* flies recorded in China, namely: *S. sinkiangensis* (Ding & Ho, 1962) Leng, Lane & Lewis, 1987 (Xinjiang, Inner Mongolia) and *S. sintoni* Pringle, 1953 (Xinjiang, Synonym: *S. arpaklensis* Perfiliew, 1933). These two phlebotomines distributed in the desert area of Northwest China and *S. wangi* is a phlebotomine of the rainy forest in Southwest China.

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