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A REDESCRIPTION OF ADULTS OF SIPHLONURUS FLAVIDUS PICTET (1865) (EPHEMEROPTERA, SIPHLONURIDAE)

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Abstract. New remarks on the morphology of Siphlonurus flavidus Pictet /1865/ both adults /male and female/ and female subimagines are given and figured.

Taxonomy, Iberian peninsula, adults

Pictet (1865) described Siphlonurus flavidus, a Spanish mayfly, subnom. Baetis flavida and Eaton (1883-88)(subnom. Siphlurus flavidus) gave its description also. This latter author as well as Degrange (1955) both referred to the relative length of the different parts.

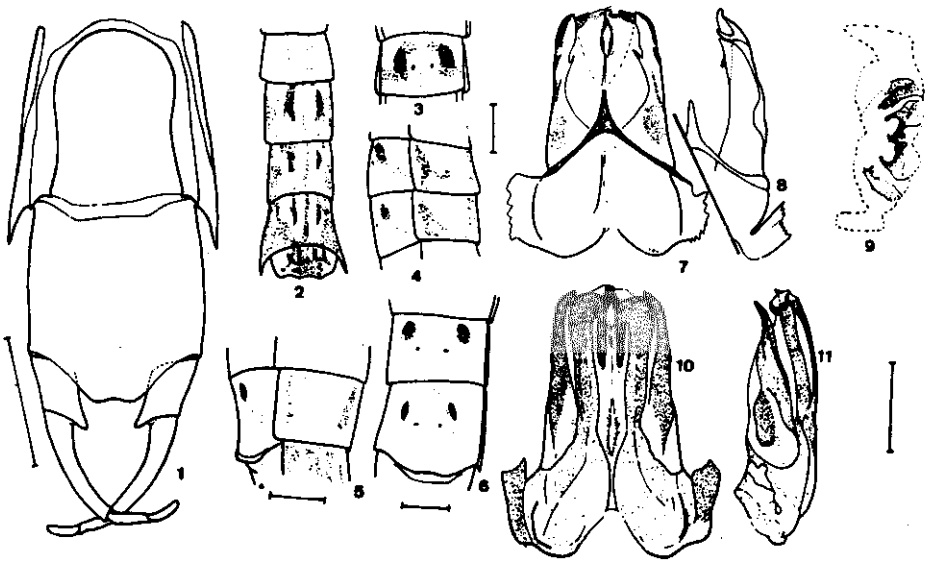
Recently Puthz (1977) made a brief reference which includes mainly a short description of the male genitalia of this species using type specimens of the Pictet's collection Dr. Puhtz (pers. comm.) informed me that type specimens were in poor condition.

Nevertheless, this species has not yet been well described. Fresh Spanish specimens of this species of both male and female sex have been caught recently by Prof. Dr. V. Monserrat. It has been possible to give additional remarks on the morphology of this species, based on the study of 11 male adult specimens, 1 female and 5 female subimagines. Specimens came from: Calzada de Béjar, Prov. Salamanca, 800 m, U.T.M.: 30S. TK 67., 13. V. 1977, 10 males, 1 female (V. Monserrat leg.) and Requejo, Prov. Zamora, U.T.M.: 30T. PG. 85., 6. VI. 1977, 1 male, 5 females (V. Monserrat leg.).

MALE IMAGO

Dimensions: see Table 1.

Head yellowish; compound eyes brown-grey with two yellowish transversal lateral lines, dorsally very close to each



Figs. 1 - 11: 1 - 9th abdominal sternite and external genitalia. 2 - 6th - 10th abdominal tergites of male. 3 - 4th abdominal sternite of male. 4 - 3rd and 4th abdominal segments of male in lateral view. 5 - 7th segment of female in lateral view. 6 - 6th and 7th sternites of female. 7 - penis, dorsal view. 8 - dorsal view after clear by KOH. 9 - frontal view of the tip. 10 - ventral view. 11 - penis in lateral view /left/. Scale 1 mm.

other (sometimes touching); ocelli laterally brown, distally and ventrally white. Lateral parts of thorax yellowish; mesonotum olive-grey; scutellum and metanotum with a yellow drawing; prosternum and mesosternum yellowish; metasternum olive-grey. Fore legs brown with femora darker, 2nd and 3rd legs yellowish, external side of trochanter with a light dot covering almost whole surface, two pale-brown lines along the external surface of femur, the joints of segments and the hind segment of tarsus darker, tarsal claws with the dorsal half dark and the ventral half lighter. Wings hyaline, pterostigma and basal region yellowish, costa yellow; in the fore wings, the proximal half of costa darker, subcosta and radius alternatively yellow at basal part, brown-yellow in the medial part and yellow at the distal region, the remainder of wing venation are light yellowish-brown; there are shaded cross veinlets between: C-Sc, Sc-R, R-Rs, Rs-MA and MA-Mp. Abdomen yellowish, tergites with light drawings on segments 1 - 6, rectangular marks on segments 2 and 3, somewhat triangular on segments

Table 1. Dimensions of Siphlonurus flavidus Pict.

	MALE IMAGO				FEMALE IMAGO				FEMALE SUBIMAGO			
		$\bar{x}$	s	n			$\bar{x}$	s	n			
Body length /mm./	10.07-15.76	13.39	1.71	11	14.75	9.87-12.61	11.19	1.33	5			
Length of fore wings /mm./	12.41-15.97	15.03	1.05	11	20.35	12.21-14.03	13.28	0.90	5			
Width of fore wings /mm./	4.19- 5.79	5.22	0.46	11	6.66	4.27- 5.19	4.77	0.38	5			
Length of hind wings /mm./	4.57- 7.53	6.93	0.97	11	10.17	5.29- 6.61	5.88	0.57	5			
Width of hind wings /mm./	3.26- 4.58	4.14	0.38	11	5.09	3.05- 3.56	3.33	0.22	5			
Length of cerci /mm./	19.83-24.00	21.94	1.28	9	24.82	10.68-11.29	10.99	0.43	2			
Length of terminal filaments /mm./	0.22- 0.52	0.38	0.12	10	0.41	0.20- 0.41	0.30	0.10	4			
Length of fore femur /mm./	3.04- 3.72	3.64	0.22	10	3.32	2.28- 2.60	2.42	0.14	5			
Length of fore tibia /mm./	2.64- 3.28	3.09	0.19	10	2.60	1.84- 2.16	1.97	0.12	5			
Ratio femur/tibia /fore leg/	1.15- 1.21	1.18	0.03	10	1.28	1.19- 1.25	1.23	0.03	5			
Ratio tibia/femur /fore leg/	0.82- 0.87	0.85	0.02	10	0.78	0.79- 0.84	0.81	0.02	5			
Gradation of fore tarsus segments	1 = or ≅ 2, 3, 4, 5				1,2,3,5,4	1 ≅ 5, 2, 3, 4						
Relative length of fore tarsal segments:												
t_1		43.75	3.97	10	33.00		13.80	2.28	5			
t_2		43.10	3.96	10	20.50		12.30	1.20	5			
t_3		40.90	3.53	10	18.00		9.40	0.96	5			
t_4		35.05	2.78	10	12.00		7.00	0.61	5			
t_5		22.95	1.66	10	14.00		14.00	1.22	5			
Gradation of hind tarsal segments					1 ≅ 5,2,3,4							
Relative length of hind tarsal segments					13.9.5,7,4.5,12							

4 - 6; segments 7 - 10 more opalescent with a drawing as shown in Fig. 2; lateral and hind margins of tergites shaded light brown (Fig. 4); sternites with well visible muscular insertions united by a faint shaded drawing in arc (Fig. 3); 9th segment extended (Fig. 2). Cerci yellowish, proximal half darker.

External genitalia with forceps base slightly emarginate as shown in Fig. 1 or uniformly curved. Penis as in Figs. 7 - 11; ventral penis lobes without teeth; dorsal median sclerite with a triangular point forwards.

FEMALE IMAGO

Dimensions: see Table 1.

Colour similar to male but paler (Figs. 5, 6). Hind margin of subgenital plate slightly emarginate (Fig. 6).

SUBIMAGINE FEMALE

Dimensions: see Table 1.

Colour very similar to imago. Subgenital plate not so clearly emarginate as imago and with different gradations of tarsus segments.

REMARKS

Eaton (1883 - 1888) wrote that for a "normal species (type S. flavidus)" the gradations of tarsal joints was: 2 = 3 - 4, 1, 5 for male fore legs; 1, 2, 5, 3, 4 for fore female legs. This disagrees with our observations (Table 1) as well as with the male measurements based on the type material given by Puthz (1977).

On the other hand, we have not seen any cut on the tip of the triangular point of the dorsal median sclerite of the penis as Puthz (1977, fig. 5) indicated in his study.

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