

## DESCRIPTION OF A NEW SPECIES OF BLACKFLY (DIPTERA: NEMATOCERA: SIMULIIDAE) FROM PAKISTAN

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A new species *Simulium (Wilhelmia) pindiensis* was recorded from Potwar. This species was described in detail with special reference to the male and female genitalia. This species was also compared with the other known species of the genus.

**Key words:** Nematocera, *Simulium*, Blackfly

### Introduction

The blackflies of the family Simuliidae are of great medical importance being vector of several diseases causing severe irritation and sores on the human skin. Their distribution largely depends on the availability of suitable breeding grounds such as fast flowing rivers and streams with a rocky bed and partially submerged vegetation. Several species of the genus *Simulium* have been recorded from Indo-Pakistan subcontinent [1-14]. During the process of revising the genus *Simulium* of Pakistan several specimens were encountered significantly different from the other species of the genus and so recognized as a new species, *Simulium (Wilhelmia) pindiensis*. Genitalia were dissected under a stereomicroscope and drawings were prepared using a camera lucida.

Genus *simulium latreille*. Wings without basal cell, costa with spinules as well as hairs and the radial sector not forked; calcipala and pedisulcus both well developed. Ventral plate of male sometimes complex and toothed.

Subgenus *Wilhelmia enderlin*. Basal section of radius haired; pleural membrane haired; claws of female without basal tooth and usually enlarged. Gonapophyses drawn out into a curled acuminate process.

*Simulium (Wilhelmia) pindiensis* sp.nov. Vertex setae absent in male, pale in female; post cranium setae brown in male, pale to dark brown in female; clypeus setae dark brown; thorax black with reddish-brown tinge; supra alar ridge scale pale; side scales dark brown in male, pale in female; scutellum setae pale to dark brown; basicostal setae dark brown; stem vein setae pale to dark brown; haltere pale; arculus pale in male and pale to brown in female; calypter margin pale to brown in male and pale in female; costa-1 setae brown in male and pale to brown in female; coxa-3 setae pale in male, pale to brown in female; trochanter-2 setae brown; trochanter-3 dorsal setae dark brown; abdomen with short bright yellow hairs. First two segments of the abdomen are distinctly yellow and the abdominal tergite setae V-ix brown in male and

pale in female.

**Male genitalia.** (Fig. 1) Basistyle (coxite) quite large, longer than broad; covered with small and long spines; dististyle (style) very small, curved arising subterminally, covered with minute fine and stout spines, apically sclerotized and terminating into a claw. Ventral plate (intercoxal piece) broad V-shaped, the limbs ending in broad apodemes; median keel of ventral plate elongated rod-like, strongly chitinized, covered with numerous small median and long marginal spines; paramere narrow ribbon-like with profusely spinose parameral hooks in the genital region; area between dorsal sclerite and median sclerite strongly studded with spines.

**Female genitalia.** (Fig.2) Genital fork long, Y-shaped; anterior gonapophyses spinose and chitinized, narrow posteriorly and curled and upwards; paraproct large, broader than long, chitinized, covered with few large and many small spines; cerci small, club-shaped having minute and large spines.

**Material examined.** Holotype male, 29-ii-78, Pakistan, Rawalpindi, collected by S.R.Ali, lodged at Pakistan Museum of Natural History (PMNH), Islamabad. Paratypes 3 female, 23-iv-80, Rawalpindi, 1 male, 29-ii-78, 1 male, 25-

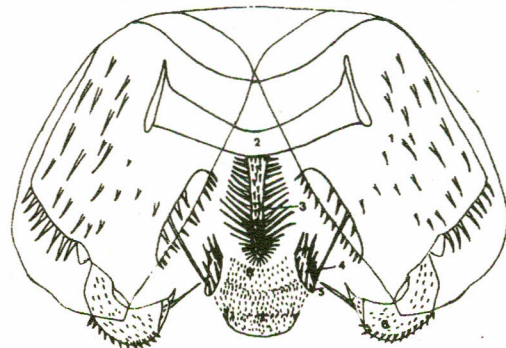


Fig. 1. Male genitalia of *Simulium (W) pindiensis* (ventral view, x 250); 1, basistyle; 2, ventral plate; 3, median keel of ventral plate; 4, paramere; 5, parameral hooks; 6, dististyle; 7, median sclerite; 8, dorsal sclerite.

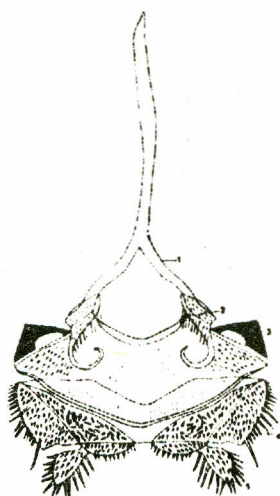


Fig. 2. Female genitalia (ventral view, x 250): 1. genital fork; 2. anterior gonapophysis; 3. 9th tergite; 4. paraproct; 5. cercus.

vii-78, 1 female, 25-ii-79, 1 female, 26-iii-79, Islamabad; 4 female, 3 male, 26-vi-75, 1 male 28-i-80. Wah Cantt., collected by S.R.Ali, lodged at PMNH.

*Comparative note.* *Simulium (W.) pindiensis* resembles to *S.(W.) mediterraneum* and *S.(W.) paraequinum* in the form of claws and gonapophyses. However, *S. (W.) pindiensis* differs from *S. (W.) mediterraneum* and *S.(W.) paraequinum* in the shape of ventral plate, apodemes, median keel, parameral hooks, basistyle and styles, paraproct and genital fork.

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