

## A NEW *HELICOPSYCHE* FROM THE SEYCHELLES (TRICHOPTERA, HELICOPSYCHIDAE)

By G. MARLIER (Bruxelles) & H. MALICKY (Lunz)

### Abstract.

A new *Helicopsyche* (*H. kantilali* n.sp.) is described from the Seychelles Is.

### Introduction.

Six species of Trichoptera have long been known from the Seychelles Islands (ULMER 1910) including a species of *Petrotrichia* (*P. palpalis* ULMER). The latter is actually a *Helicopsyche* (and not as alleged by ULMER a Hydroptilid) and must be called *Helicopsyche palpalis* (ULMER).

A second species was found by Expedition F. Starmühlner (1974) (as larvae and mature pupae) and by G. Marlier (1976) at all instars at several stations of the Island of Mahé; the immature instars will be described elsewhere, the adult being described in the present paper.

The new species is called *Helicopsyche kantilali* n.sp. in the honour of Mr. Kantilal Jiwan, keen naturalist and nature protectionist from Mahé, who was very helpful in organizing the last mentioned expedition.

### *Helicopsyche kantilali* n.sp.

#### Material:

Expedition G. Marlier: Mahé 16 ♂♂ + 1 ♀ Riv. Grand St. Louis (550 m) 1. XI. 76; Du Cap Riv. (100 m) 2. XI. 76, U.V. light (one specimen in preparation 7701726A), more material in the pupal stage: Expedition F. Starmühlner: Riv. Athanas (NW) alt. 300-350 m, 18. 2. 74: 7 pupae and prepupae. Expedition G. Marlier: Riv. Grand St. Louis 250-450 m, 15. X., 1. XI. 76: 23 pupae; Riv. Gd. Anse (Salazie) 20. X. 76: 2 pupae.

#### Description:

Size: Body length 1,35 mm; anterior wing 2,0 mm.

Brownish grey with the head and thorax darker, pleura of abdomen lighter, pilosity dark, paler on the wings, still darker on the body and legs. No silvery white hair patches on the wings.

Head strongly convex dorsally, epicranial sulcus complete and black, two long oval warts behind and above the eyes; eyes covered with microscopic hairs.

Antennae of 38 segments: first segment as long as the head. Maxillary palps short, not much longer than the first antennal segment, consisting of two articles, the first short, the second one nearly twice as long.

Tibial spurs 1/2/4.

Abdominal sclerites well delimited by sclerous rods; posterior margin of sternite II produced in a triangular obtuse projection, which reaches the anterior margin of sternite III,

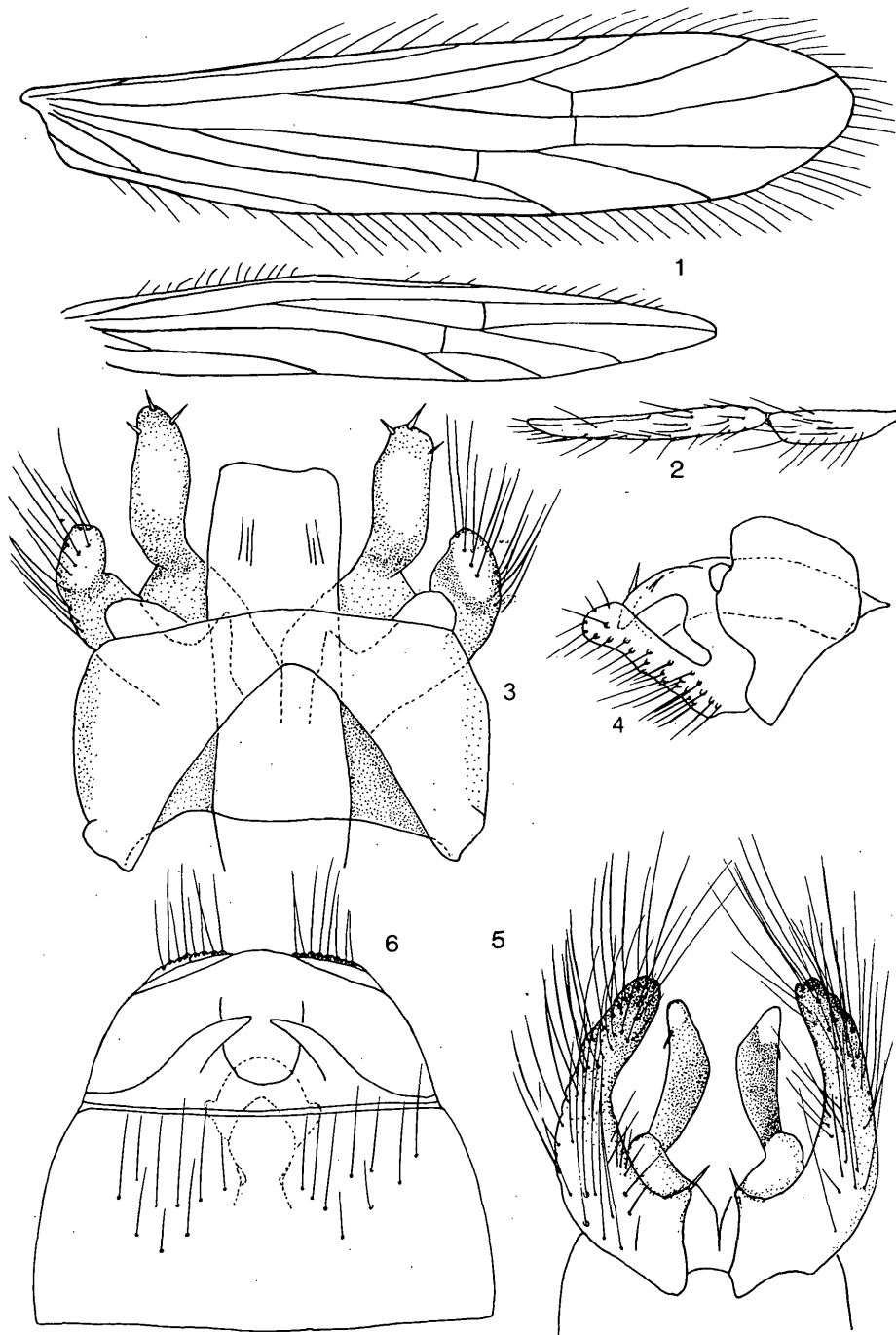


Plate I: *Helicopsyche kantilali* n. sp. - 1. Wings. - 2. Maxillary palp. - 3, 4, 5. Dorsal, lateral and ventral views of male genitalia; in 5, penis taken away. - 6. Tip of female abdomen.

sternite III with both posterior and anterior margin concave, other sternites without sclerous posterior margins.

The surface of the abdominal sclerites covered with a very dense velvet of thin hairs interspersed with long setae, arranged in an irregular pattern: generally very loosely spaced anteriorly and in a rather dense row in the central or the posterior regions; 2d: without setae; 3d: 10 anterior and median, around 20 in the posterior row; 4th: 12 anterior, 18 median row; 5th: 10 anterior, 18 medio-posterior; 6th: 6 anterior, 14 medio-posterior; 7th: 18 setae more or less median; 8th: more or less 34 setae inserted on the whole surface. No median tooth on 6th sternite.

Wings. The wings are much more elongated than those of other species of the genus (nearly 5 times longer than broad as against 2,8 by *H. sperata* McL.). The anterior ones have a parabolic apex, the posterior ones are pointed. Membrane covered with very small hairs and very thick dense hairs not in the shape of "scales". Nervation simplified by suppression of furca 3 (f<sub>4</sub> of MACLACHLAN) in fore wing, and regression of the cubital veins.

Male genitalia: Preanal appendages reduced to a small round tubercle; penis stout, down-curved with a median sclerotized spot.

Gonopods with two branches:

a) a strong and dark basal branch, which arches dorsally, the posterior (ventral) side of which is covered with long dense bristles.

b) a rather thin and pale posterior (internal) branch with no hair except two small spine-like bristles near the end; the latter branch describes a S-shaped curve in a vertical plane, the end being bent ventrally in the shape of a claw.

At their bases, branches a and b are not very close, much less so than in *H. sperata* McL. and *H. bacescui* ORGHIDAN & BOTOSANEANU; actually they seem to arise independently from the posterior wall of segment IX.

c) the ventral-medial corner of basal branch a bears a rather strong posterior tooth much less developed than in *H. palpalis* (ULMER).

Female genitalia: Abdomen very obtuse, sixth sternite without a tooth; dorsal appendages of the ninth tergite in the shape of two thin irregularly rounded lobes with a row of stiff setae. Post-genital (dorsal) scale oval.

Affinities.

*Helicopsyche kantilali* n. sp. comes very close to *H. palpalis* ULMER. In the mature stage it differs from the latter principally by the uniform colour of the wings, the absence of tooth on the sixth abdominal sternite and by the shape of the posterior branch of the gonopods which is not pointed at the end. In addition there is in *H. kantilali* a much shorter inner process at the base of the basal branch.

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Address of the authors: Prof. Dr. Georges MARLIER, Institut Royal des Sciences Naturelles, Rue Vautier 31, B-1040 Bruxelles.

Univ. Doz. Dr. Hans MALICKY, Biologische Station Lunz, A-3293 Lunz.

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