h = 3, ph = 2, n = 4, sc = 1 (2) + 3 (les sap sont très longs et forts), pp = 2 (plus 2 poils), pst = 2, qr = 1 : 1 : 1.

Ailes : légèrement sombres. L'épaulette est noire et la basicosta d'un blanc-jaunâtre. La nervure r_1 est glabre ; la nervure r_{1+3} est garnie de macrochètes à peu près jusqu'à la nervure transversale r-m. Cubitulus courbé en angle droit et prolongé d'un pli. L'épine costale est petite.

Chétotaxie des tibias : les tibias antérieurs ont 3 ad et 1 pv ; les tibias médians sont pourvus de 2 ad, 1 av, 2 pd et 1 pv ; les tibias postérieurs ont quelques ad (2 ad sont plus grands), 2 av et 2 pd.

Abdomen : noir et couvert d'un tomentus pauvre, mais qui forme des dessins en damiers peu distincts. Les macrochètes médio-marginaux du tergite III sont faibles. Le tergite VI est luisant, partiellement brun foncé et noir.

Longueur du corps : 11,5 mm.

MÂLE : inconnu.

Holotype : 1 ♀ avec les étiquettes suivantes : « JAPAN : nr. Mt. Takao, X-14-1931, J. L. Gressit » (en réalité il s'agit de l'île Formose), « L. Gressit Collection » et « Collection of the California Academy of Sciences, San Francisco, Calif ».

Remarques

L'holotype a l'œil droit détruit ; le palpe droit et la trompe sont cassés. Il est déposé dans les collections de l'Académie des Sciences, Entomologie, San Francisco, California, U.S.A.

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Bull. Annls Soc. r. belge Ent., 121 (1985) : *311-316*

The larva and pupa of **Tanytarsus sylvaticus** (VAN DER WULP, 1859) (Chironomidae, Diptera)*

by Boudewijn R. GODDEERIS**

Summary

The larva of *Tanytarsus sylvaticus* is described for the first time and a redescription of the pupa is given. The shape of the anal tubules is a useful diagnostic character.

Tanytarsus sylvaticus was a common species in two trout-ponds at Mirwart (GODDEERIS, 1983). Although the pupa of this species was already described, (HIRVENOJA, 1963 ; SHILOVA, 1976 ; LANGTON, 1984) a redescription with additional notes is given. The larva of *Tanytarsus sylvaticus* is described for the first time. Four individual sequences larva-pupa-adult were obtained.

Diagnosis adult male

Conform with REISS and FITTKAU, 1971 p. 136. See also fig. 1a-b : the hypopygium of a specimen from Mirwart.

Description pupa

Length exuviae about 5 mm.

Colour. Exuviae transparent. Cephalothorax light brownish ; basis of antennal and p_1 sheaths and margins of wing sheaths only

* Received for publication : 24th April 1985.

** Afdeling Hydrobiologie, Koninklijk Belgisch Instituut voor Natuurwetenschappen, Vautierstraat 29, B-1040 Brussel.

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slightly darker. Caudo-lateral combs and stripes along the margins of segment VIII pale brown. Anal lobes practically colourless.

Cephalothorax : Cephalic tubercles (fig. 3) developed ; length about 50 µm, as wide as high. Length frontal setae ± 100 µm. Base of antennal sheath with a mesal and low conical protuberance, somewhat pointed. Thoracic horn (fig. 4) rather long (± 0.40 mm) and wide in the basal part (± 7 × as long as wide) ; distal third tapering to the apex and ringed ; spinules on the surface of a very particular configuration ; they are incised with 2-5 fine points (fig. 4). Granulation on the thorax well developed on the anterior part : coarse near the suture, very fine between Dc 1-2 and the thoracic horn implantation. Wing sheaths mostly with nose ; without pearl row.

Chaetotaxy of thorax : 3 Pc, 1 MAps, 1 LAps and 4 Dc present ; all these setae subequal to the frontal seta. Dc-setae in two groups (Dc 1-2 and Dc 3-4) near the thoracic suture.

Abdomen : Tergite I without shagreenation. An anterior and a posterior transverse band of coarse shagreenation on tergite II, sometimes connected by a longitudinal band on each side. Row of hooklets half as wide as segment II.

On the middle of tergite III, on each side, a longitudinal field of spines (fig. 2a) ; these fields half as long as segment III and ± 10 × as long as wide ; the mesal spines long and slender, the outermost short ; in front of the fields a transverse band of shagreenation. On the middle of tergite IV, somewhat more anteriorly, a pair of longitudinal fields of spines ; these fields somewhat shorter than those on tergite III, but as wide or slightly wider ; the mesal spines mostly long and slender (fig. 2b) but sometimes half-long (fig. 2c), the outermost always short ; around the anterior extremity of the fields some shagreenation. A pair of longitudinal fields of short spines on tergite V (fig. 2d), almost completely on the anterior half, these fields somewhat shorter than those on tergite IV, but as wide ; in front of the fields sometimes a weak shagreenation. On the anterior half of tergite VI a pair of longitudinal fields of short spines (fig. 2e) ; these fields about half as long as those on tergite IV, but as wide ; in front of the fields sometimes a weak shagreenation. Tergite VII without shagreenation. Tergite VIII with a patch of shagreenation in each anterior corner. A patch of shagreenation dorsally on each anal lobe. Caudo-lateral comb with 6-8 strong teeth on the posterior

margin ; the whole surface of the comb dentated. Sternite I and II and the anterior half of sternite III with a weak to very weak shagreenation. Sternite VIII a patch of weak to very weak shagreenation in each anterior corner.

Pedes spurii B on segment II.

Chaetotaxy of abdomen :

	L	D	V	O_d	O_v
I		3			
II	3	3	3	1	1
III	3	5	4	1	1
IV	3	5	4	1	1
V	3	5	4	1	1
VI	3	5	4-(5)	1	1
VII	3-4	5	4	1	1
VIII	4	1	1	1	1

The filamentous setae not well developed (except on the anal lobes), at best only half as long as the segment ; longest filamentous seta measured D_2IX = 150 µm. L-setae on segment VII-VIII mostly transitions between a simple seta and a filamentous seta. D- and V- setae on segment VIII and the pair of D-setae on each anal lobe filamentous or nearly filamentous. Anal lobe with a continuous fringe of about 28 (24-31) long filamentous setae.

Description fourth instar larva

Length of full-grown larva 6.5 to 8.5 mm.

Head capsule light yellow, about 0.36 mm long. Occipital margin black, but dorsally pale. Posterior 2/3 of submentum well darkened on both sides ; anterior third pale. Dorsal eyespot slightly larger than ventral ; distance between eyespots distinctly greater than width of dorsal spot. Pedestal of antenna rather short, less than one fifth of total length head capsule ; extremity obliquely cut and without a spur or distinct point. Clypeal seta S_s simple.

Antenna (fig. 6) five-segmented. First segment rather short ; length 147.7 µm 15th March 1977 (95 % confidence limits : 142.4 µm to 153.0 µm, n = 8). Implantation of antennal seta just above the middle of the first segment ($\bar{x}$ = 53.2 % of the length of the first segment from the base ; 95 % c.l. : 50.2 % to 56.1 %,

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FIG. 1-7. — *Tanytarsus sylvaticus* (VAN DER WULP, 1858)

1 : Adult male ; 1a : hypopygium, dorsal view ;
1b : hypopygium, appendage 2a ;
2 : Pupa : fields of spines on abdominal tergites ; 2a : tergite III ;
2b-c : tergite IV ; 2d : tergite V ; 2e : tergite VI ;
3 : Pupa : cephalic tubercle ;
4 : Pupa : thoracic horn ;
5 : Larva (fourth instar) : abdominal extremity ;
6 : Larva (fourth instar) : antenna ;
7 : Larva (fourth instar) : dorsal and ventral teeth of mandibula.
Scale = 50 µm

n = 8). Length second segment 41.6 µm (95 % c.i. 39.9 µm to 43.2 µm, n = 8) only slightly widening to the apex, and there about half as broad as segment I ; basal 4/5 sclerotized and brown, distal fifth membranous and somewhat swollen. Short style on top of second segment. Antennal blade not extending beyond second segment ; with a short accessory blade joined at the swollen base. Third segment about 17 µm long ; basal fifth membranous, distal 4/5 sclerotized. Fourth segment about 10 µm long and fifth segment 5 µm. Lauterborn organs at the apex of second segment ; pedicels rather short, ± 66 µm and ± 2 x as long as segments 3-5 ; the organs rather large : ± 7 µm long and ± 4.5 µm broad.

Labrum : Setae anteriores S_I with pectinated mesal margin and top (± 20 slender teeth). Setae posteriores S_{II} long, falcate and smooth. Five chaetae labrales at each side, smooth or finely serrated or with some slender teeth against the concave rim. Pecten labralis with about 40 teeth. Premandible with 5 pale teeth ; configuration typical of *Tanytarsus* (see GODDEERIS, 1984) ; brush well developed.

Epipharynx : Pecten epipharyngis of 3 distally serrated scales ; median scale with 3-4 teeth, lateral with ± 5 teeth. Chaetulae laterales and chaetulae basales typical of *Tanytarsus* (GODDEERIS, 1984).

Mandibula (fig. 7) with 4 dark ventral teeth ; third lateral tooth completely developed. Two pale dorsal teeth at the apex. The mandibles (and mentum) often worn out. Inner basal margin with traces of spines. Seta subdentalis falcate in distal half ; extends beyond apical tooth. Pecten mandibularis typical of *Tanytarsus* : distal tooth much stronger than the others. Seta interna of 4 ramefied branches.

Maxilla : Typical of *Tanytarsus* ; chaetulae of palpiger slender.

Mentum with simple (worn out ?) median tooth, central part pale, lateral somewhat darkened. Five pairs of dark lateral teeth gradually dimishing in length. Ventromental plates short and wide : ± 5 x as wide as long and slightly wider than mentum.

Abdomen with ramified setae typical of *Tanytarsus*. Supraanal setae poorly developed, ± 120 µm long and without swollen base. Anal tubules (fig. 5) very characteristic : short and spherical. Posterior parapods each with 16 smooth claws.

Diagnosis fourth instar larva

Head capsule 0.36 mm long. Antennal pedestal without spur nor point. Clypeal seta S_3 simple. Lauterborn organs with rather short pedicels : ± 2 × length of segments 3-5. Mandible with 2 dorsal teeth. Supraanal setae poorly developed. Anal tubules short and spherical.

Diagnosis third and second instar larva

Length of head capsule ± 0.23 mm and 0.15 mm respectively. For the rest similar to the diagnosis of the fourth instar.

Diagnosis of the first instar larva

The first instar larvae are easy recognizable from the other *Tanytarsus*-first instar larvae by the short anal tubules.

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Imprimé en Belgique