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Description of *Chaetocladius algericus* sp.n. and *Smittia durandae* sp.n. (Dipt., Chironomidae, Orthocladiinae)

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Abstract

The author describes the male imago and pupa of *Chaetocladius algericus* sp.n. from Algeria and the male imago of *Smittia durandae* sp.n. from Lebanon.

Species descriptions

Chaetocladius algericus sp.n.

Material: holotype, 1 ♂ (ex-pupa), loc.typ. Arbaa des Ouacifs, Oued Aïssi, Grande Kabylie (Algeria), rhithral, alt. 980 m, 05/07/85. Collection of the hydrobiological laboratory of Toulouse, Paul Sabatier University.

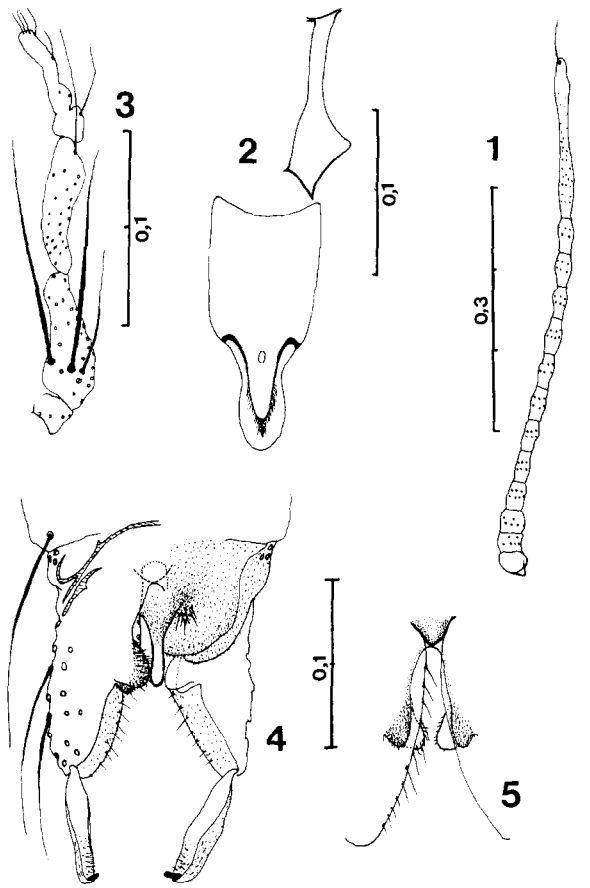
Description

Male imago (holotype)
Colour brown yellowish; halter pale; wing, legs and abdomen strongly covered with setae. Total length L = 2.45 mm. Head: eyes bare, vertex with 8 setae; antennal flagellum (Fig. 1) 13-segmented, L = 647 μm, AR = 0.60, L (μm) of segments: 27, 24, 27, 36, 37.5, 39, 42, 42.5, 43.5, 43.5, 43.5, 43.5, 198; terminal flagellomere with 1 apical setae as in *Smittia* genus; segments 2–12 with 2 whorls of 6–8 setae. Cibarial pump and tentorium as in Fig. 2. Palp (Fig. 3) 4-segmented, L (μm) of segments: 27, 87, 90, 66, sensilla clavata absent, segment 2 with 2 long setae reaching at least the top of segment 3. Thorax with 26 acrostichals, 16 dorsocentrals, 10 prealars, 14 scutellars, antepronotals and humerals absent. Wing, L = 1.31 mm, L from arculus 1.08 mm; anal lobe rounded, SCf (2–3), all veins with numerous setae: Sc (86–92), R (8–9), R1 (26), R4 + 5 (128), M3 + 4 (73), Cu1 (39), Cu (74), Vf (124), An (78); sq (6–8); membrane of wing strongly covered with macrotrichia visible at 100 ×. Legs: spur of PI (1, L = 36 μm), P2 (2, L = 42 and 18 μm), P3 (1, L = 93 μm); tibial comb with 12 setae; length (μm) and proportions of legs as shown in Table 1.

Hypopygium (Figs. 4–5). Anal point 42 μm long, 6 μm wide, somewhat expended distally, base with macrotrichia, anal tergite with 10 setae (5 on each side of anal point). Gonocoxites 141 μm long, 54 μm wide, with 2 superposable median volsella (dorsally, Fig. 4; ventrally, Fig. 5), rounded appendage between the ventral bases of gonocoxites (Fig. 5). Styles 66 μm long, without crista dorsalis.

Pupa (male, n = 1)
Colour clear-transparent, total length L = 3.07 mm. Thorax 0.77 mm long; with 2 lateral

antepronotals (L = 45 μm), 3 precorneals (L = 60, 60 and 43 μm), dorsocentrals, prealars, supraalars and metanotals absent. Thoracic horn



Figs. 1–5. Chaetocladius algericus sp.n., male imago: antenna (1); tentorium and cibarial pump (2); palp (3); hypopygium in dorsal view (4) and in ventral view (5). Scales in mm.

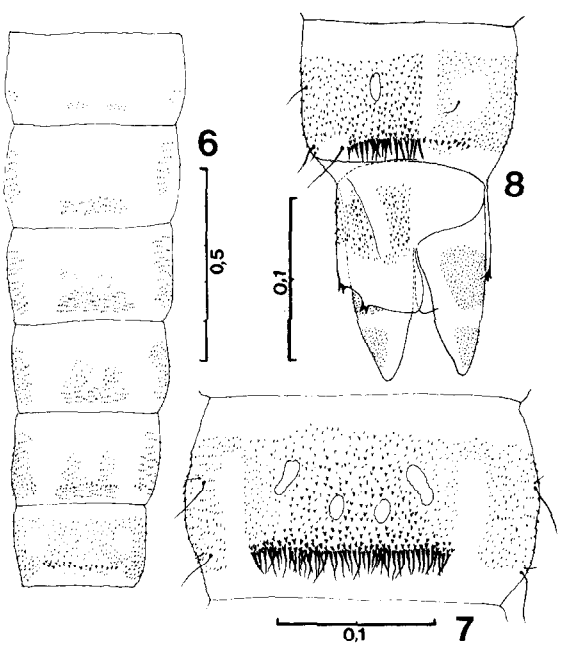
Table 1. Length (μm) and proportions of legs.

	P1	P2	P3
Fe	511	503	548
Ti	496	474	569
Ta1	365	350	380
Ta2	277	168	263
Ta3	211	139	213
Ta4	128	98	128
Ta5	73	68	73
LR	0.73	0.74	0.67
BV	2.99	2.80	2.21
SV	2.76	2.79	2.05
BR	2.80	2.05	2.86

apparently absent. Abdomen (Fig. 6–8) 2.30 mm long; tergites II–VIII posteriorly with a narrow transverse band of long spines (II, n = 81; III, 72; IV, 65; V, 51; VI, 43; VII, 36; VIII, 26; length of spines 15–48 μm), the remainder of the tergites is covered with spinules and small points discontinuous laterally (Fig. 7) except on terigte VIII (Fig. 8); lateral filaments on segments I–VIII: 1, 4, 4, 4, 4, 4, 4, 3; spinulae pattern on sternites III–VIII as in Fig. 6. Anal segment (Fig. 8). Anal lobe 171 μm long, 180 μm wide, rectangular, with discontinuous shagreen dorsally, base with 4 pairs of small teeth. Genital sac 204 μm long overreaching the anal lobe with 75 μm, dorsolateral area with very fine spinules in 2 separate groups. Larvae unknown.

Differential diagnosis

According to hypopygial characters of male, *Chaetocladius algericus* sp.n. is somewhat similar to *C. suecicus* (K.) but differs essentially in having an apical setae on top of last antennal flagellomere, a ventral appendage between the bases of



Figs. 6–8. Chaetocladius algericus sp.n., male pupa: sternites III–VIII (6); tergite V (7); segments VIII–IX, dorsal and ventral view (8). Scales in mm.

gonocoxites and two superposable median volsella. However, pupal exuviae of *C. algericus* sp.n. is very typical and can be easily separated from others on the basis of the following combination of characters: thoracic horn absent, shagreen pattern of both tergites and sternites, anal lobe rectangular, presence of two pairs of minute teeth on anal lobe, genital sac shagreened anterolaterally and posterolaterally. Thus, imaginal and exuvial differential characters as cited above suggest to rank *C. algericus* sp.n. as a separately group species.

*Smittia durandae** sp.n.

Nine species of the genus *Smittia* are known from the leventine province (near east): *S. distalis* G. from Israel (Goetghebuer 1940–1950); *S. aquatilis* (G.), *S. contingens* (Walk.), *S. foliacea* (K.), *S. leucopogon* (Mg.), *S. pratorum* G., *Smittia* sp1 and *Smittia* sp2 from Lebanon (Moubayed & Laville, 1983; Moubayed, 1986); *S. superata* G. from Syria (Reiss, 1986). In this paper, we describe the male imago of *Smittia durandae* sp.n. which belongs to *Smittia* sp2.

Material: – holotype, 1 ♂, loc.typ. Yammouneh stream (affluent of Orontes river), Lebanon, rhithral, alt. 1330 m, 03/14/82; – paratypes: 4 ♂, same place and date of holotype +2 ♂, Jib-Jannin, Litani river (Lebanon), potamal, alt. 800 m, 03/29/82. Collection of the hydrobiological laboratory of Toulouse, Paul Sabatier University.

Description

Male imago (n = 7)

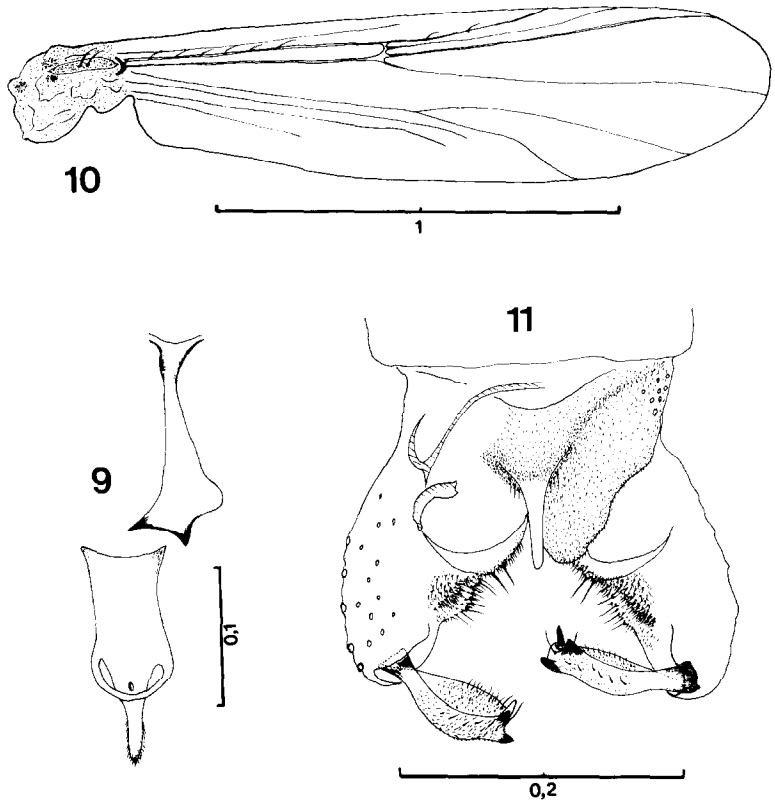
Colour dark brown. Total length L = 2.2–2.4 mm. Head, eyes pubescent, vertex with 6 setae. Antennal flagellomere 13-segmented, L = 650–655 μm, L (μm) of segments: 48, 18, 18, 20, 21, 21, 21, 21, 22, 21, 21, 21, 383; terminal flagellomere with 1 apical strong setae; AR = 1.60–1.65. Palp 4-segmented sensilla clavata absent, L (μm) of segments: 48, 96, 81, 84. Tentorium and cibarial pump (Fig. 9), proximal part of tentorium $1\frac{1}{2}$ time as long as its distal part. Thorax with 4–5 acrostichals, 12 dorsocentrals, 4 humerals, 6–7 prealars, 6–7 scutellars, antepronotals and episternals absent. Wing (Fig. 10) 1.52 mm long, L from arculus 1.32 mm; SCf (2), R (6–7), R1 (1–2), R2 + 3, R4 + 5, and sq naked; membrane of wing with microtrichia visible at 200 ×. Legs: spur of front tibia 39 μm long, spurs of middle tibia 21 and 30 μm long, spur of hind tibia 61 μm long; pseudospurs absent; tibial comb with 12–13 setae; means length (μm) and proportions of legs P1, P2, P3 as shown in Table 2.

Abdomen, ventral setae on sternites I–VIII: 0, 1, 6–13, 8–17, 10–11, 13–16, 15–17, 20–27. Hypopygium (Fig. 11). Anal point 68–71 μm long, only base with microtrichia, anal tergite with 6 setae (3 on each side of anal point base). Gonocoxites 190–195 μm long, 125–128 μm wide, with 2 lateral volsella (superior lobe is bigger than the inferior), inferior lobe with 1 oblique row of setae. Styles 106–109 μm long, flattened dorsoventrally, basal margin wide and sclerotized, distal margin with 2 subapical sclerotized teeth, crista dorsalis absent. Larvae and pupa unknown.

Table 2. Means length (μm) and proportions of legs.

	P1	P2	P3
Fe	597	635	671
Ti	659	650	715
Ta1	341	253	356
Ta2	216	151	186
Ta3	151	116	165
Ta4	106	86	89
Ta5	90	90	89
LR	0.52	0.39	0.50
BV	2.84	3.47	3.29
SV	3.68	5.08	4.89
BR	2.12	1.88	5.14

* The specific name durandae has been dedicated to Miss Y. Durand from the hydrobiological laboratory of Toulouse.



Figs. 9–11. Smittia durandae sp.n., male imago: tentorium and cibarial pump (9); wing (10); hypopygium (11). Scales in mm.

Differential diagnosis

Smittia durandae sp.n. resembles *S. contingens* (Walk.), *S. foliacea* (K) and *S. atterima* (Mg.) by the anal point morphology. Having a low antennal ratio (AR = 1.60–1.65), *S. durandae* sp.n. is particularly related to *S. atterima* (AR = 1.40–1.60). However, *S. durandae* sp.n. can be separated from the other species on the basis of the following combination of characters: lack of eminent inner lobe on gonocoxites, presence of two distal teeth on styles, crista dorsalis absent.

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