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## Redescription of pupae of the New World predaceous midges, *Pachyhelea pachymera* (Williston, 1900) and *Clastrieromyia dycei* Spinelli and Grogan, 1986 (Diptera: Ceratopogonidae)

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### ABSTRACT

The pupae of the predaceous midges, *Pachyhelea pachymera* (Williston, 1900) and *Clastrieromyia dycei* Spinelli and Grogan, 1986, are redescribed and illustrated using modern terminology from specimens collected in Buenos Aires and Entre Ríos Provinces, Argentina, and Artigas Department, Uruguay. Both species exhibit elongated, thin anteromedial sensilla that are characteristic of other genera in the tribe Palpomyiini. Character differences from known pupae of the New World species in the *Palpomyia tibialis* group are noted for *P. pachymera* and differences from other Palpomyiini genera are noted for *C. dycei*.

### ARTICLE HISTORY

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Ceratopogonidae; *Pachyhelea pachymera*; *Clastrieromyia dycei*; predaceous midges; pupae; taxonomy; Neotropical

### Introduction

The predaceous midge genus *Pachyhelea* (Diptera: Ceratopogonidae) was proposed by Wirth (1959) for *Ceratopogon pachymerus* Williston, 1900 from Mexico and three other species that he considered as its junior synonyms, *Ceratopogon magnus* Coquillett, 1905 from Texas, United States, *Sphaeromyias albidiventris* Kieffer, 1917 from Colombia and *Johannsenomyia latifemoris* Ingram and Macfie, 1931 from Argentina. Wirth assigned *Pachyhelea* to the tribe Palpomyiini and noted its overall similarity to the species of *Palpomyia* Meigen, 1818. Lane (1961) recorded *Pachyhelea pachymera* (Williston, 1900) from the states of Rio de Janeiro and Mato Grosso, Brazil. In their revision of Nearctic *Palpomyia*, Grogan and Wirth (1979) noted that *Pachyhelea* and species in the *Palpomyia tibialis* group share two plesiomorphic characters and provided four apomorphic characters for *Pachyhelea*: (1) a greatly swollen hind femur, (2) an enlarged, quadrate hind coxa, (3) a tuberculate scutum and scutellum and (4) a lack of large scutellar setae. Based on specimens from Brazilian Amazonia and Panama, Grogan and Wirth (1980) redescribed and illustrated the female adult of *P. pachymera*, provided the first description of the adult male genitalia that remained attached to a female abdomen during mating, and reviewed the taxonomic status of *Pachyhelea* and its likely sister group relationship with species in the *Palpomyia tibialis* group. Spinelli (1983) briefly described the pupa of *P. pachymera* collected from filamentous algae in a meandering stream in Buenos Aires Province,

Argentina. In their catalogue of the World Ceratopogonidae, Borkent and Wirth (1997) resurrected *Pachyhelea albidiventris* (Kieffer, 1917) from synonymy with *P. pachymera*, however, the type of this species was apparently destroyed in the Budapest Museum fire in 1956 (Grogan and Wirth 1980). Recent catalogues by Borkent and Spinelli (2000, 2007) also considered *P. albidiventris* and *P. pachymera* distinct species.

The Neotropical predaceous midge genus *Clastrieromyia* was proposed by Spinelli and Grogan (1985) for two new species: *C. schnacki*, the type species, from Ecuador, and *C. kremeri* from Amazonas, Brazil. The genus was assigned to the tribe Palpomyiini. Shortly after, Spinelli and Grogan (1986) described *C. uruguayensis* and *C. dycei* from Uruguay, and recorded *C. schnacki* from northern Argentina. Subsequently, *C. uruguayensis* and *C. dycei* were recorded from Argentina, the former by Spinelli (1987) and Spinelli and Cazorla (2003) and the latter by Spinelli (2000). Of these four known species, only the pupa of *C. dycei* has been described (Spinelli and Grogan 1986).

Because most species of ceratopogonids are known only from adults, the majority of pupal descriptions are very old and/or incomplete. They usually lack details of important characters, like certain cephalothoracic sensilla, mouthparts (labrum, mandible, palpus, labium), clypeal-labral and ocular sensilla, and first abdominal segment, and therefore, comparative analysis of their pupae is often difficult or impossible. In order to fill this gap of knowledge, we are currently reviewing the available descriptions of larvae and pupae of Neotropical species, particularly in the tribe Palpomyiini. Herein, using modern criteria and terminology, we provide redescriptions and illustrations of the pupae of *P. pachymera* and *C. dycei*.

## Material and methods

Specimens of *P. pachymera* from Argentina were collected on the banks of the Zapata Stream in Buenos Aires Province and in an unnamed small pond at Santa Ana in Entre Ríos Province, both associated with green filamentous algae. Whereas, the pupa from Uruguay came from the edge of the Lenguazo Stream in Artigas Department. Specimens of *C. dycei* are of type series, from Tacuarembó Department, Uruguay, collected from a cattle-trodden bog adjacent to an excavated watering hole, the soil of which was sandy and sunlit.

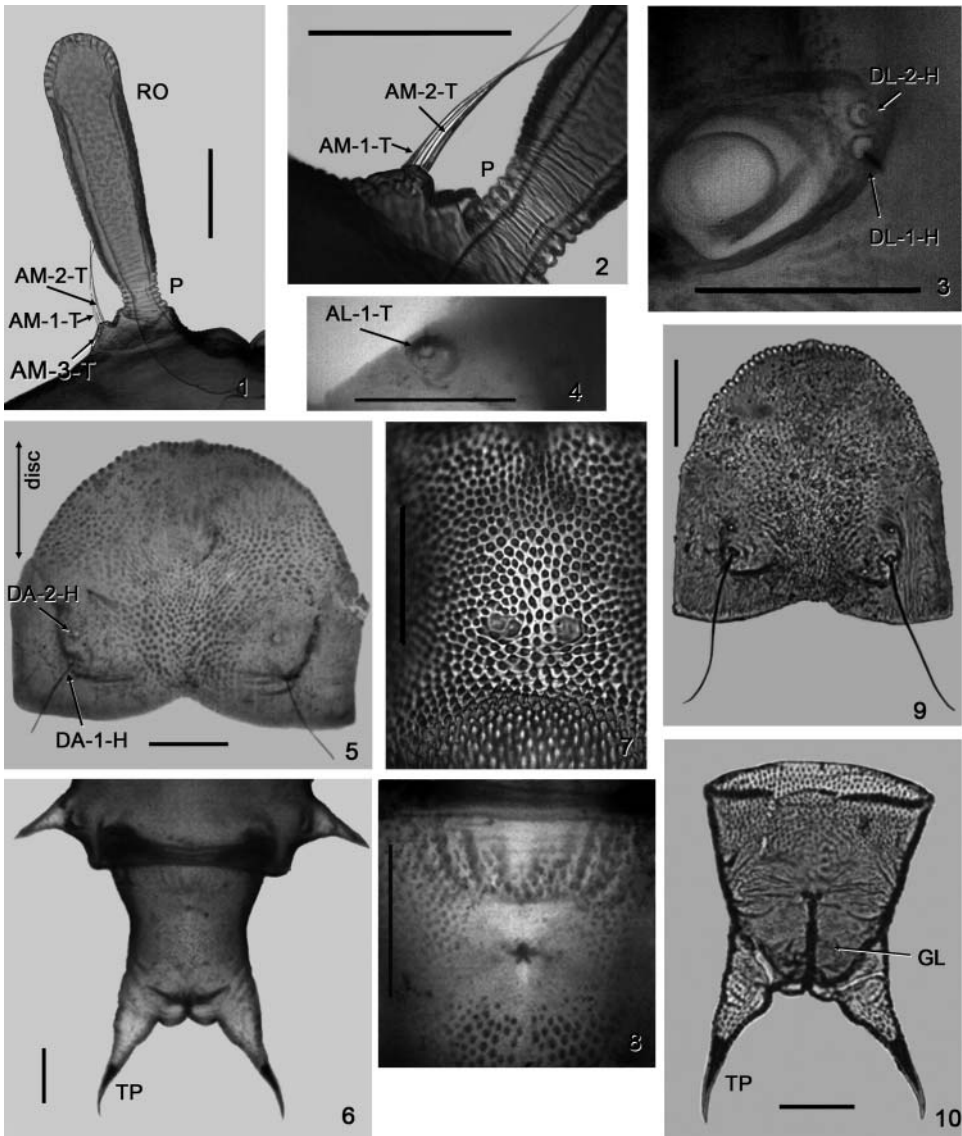
Pupae were collected with an aquatic net and transported to the laboratory with water from their natural environments in five litre plastic containers. They were reared to adults and were allowed to undergo sclerotisation before preservation in 70% ethanol. Adults and pupal exuviae were slide-mounted in Canada balsam following the techniques of Wirth and Marston (1968). They were examined and measured with a binocular compound microscope. The illustrations of diagnostic characters were prepared with the aid of an attached camera lucida. Photomicrographs were taken with a digital camera Micro-metrics SE Premiun, through a Nikon Eclipse E200 microscope. Terminology and abbreviations of pupae follows Borkent (2012, 2014). Voucher specimens are deposited in the collections of the División Entomología, Museo de La Plata, Argentina (MLPA).

## Results

### *Pachyhelea pachymera* (Williston 1900) (Figures 1–14)

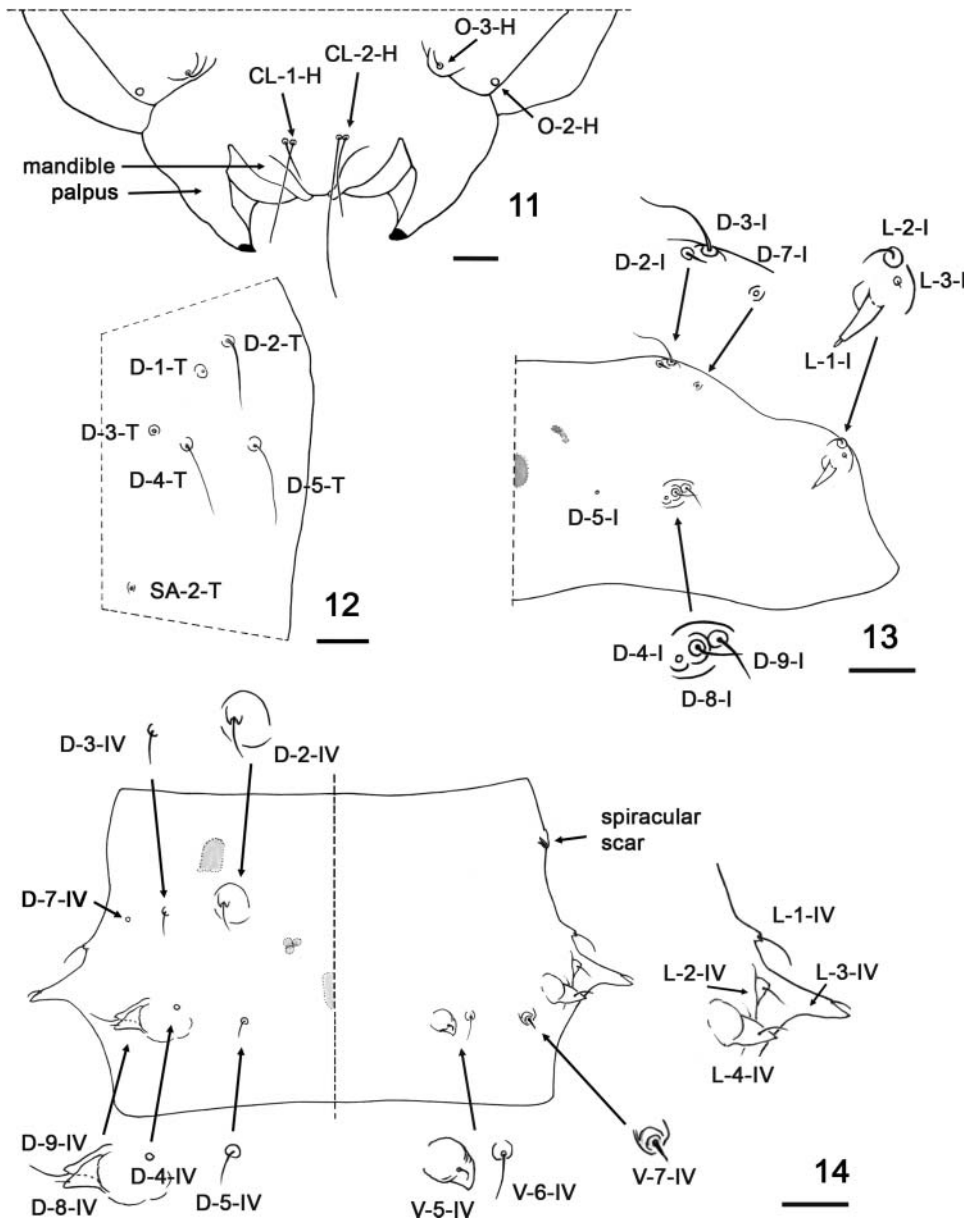
*Ceratopogon pachymerus* Williston 1900: 224 (female; Mexico).

*Probezzia pachymera* (Williston, 1900): Malloch 1914a: 137 (combination).



**Figures 1–10.** *Pachyhelea pachymera* (Williston, 1900). Female pupa: (1) respiratory organ (RO), anteromedial sensilla (AM-T); (2) detail of pedicel (P) and anteromedial sensilla (AM-T); (3) dorsolateral cephalic sclerite sensilla (DL-H); (4) anterolateral sensillum (AL-1-T); (5) dorsal apotome and dorsal apotome sensilla (DA-H); (6) segment 9, terminal processes (TP); (7) segment 9, detail of dorsal surface; (8) segment 9, detail of ventral surface. Male pupa: (9) dorsal apotome; (10) segment 9, terminal processes (TP) and genital lobes (GL). Scale bars 0.05 mm.

*Pachyhelea pachymera* (Williston, 1900): Wirth 1959: 50 (combination; redescription; synonymy); Lane 1961: 42 (Brazil records); Wirth 1962: 275 (in key); Wirth 1965: 140 (record from the north of Mexico in Nearctic catalogue); Wirth 1974: 53 (record from the south of United States in New World catalogue); Wirth, Ratanaworabhan, and Blanton 1974: 604 (in list; key); Grogan and Wirth 1979: 10 (in revision of *Palpomyia* from the north of Mexico; phylogenetics); Grogan and Wirth 1980: 75 (redescription of female,



**Figures 11–14.** *Pachyhelea pachymera* (Williston, 1900). Female pupa: (11) details of mouthparts, clypeal/labral sensilla (CL-H), oculars sensilla (O-H); (12), dorsal setae (D-T), supraalar (SA-T); (13) abdominal segment 1, chaetotaxy (dorsal view, with detail of setae); (14) abdominal segment 4, chaetotaxy (dorsal and ventral view), with detail of setae and tubercles. Scale bars 0.05 mm.

description of male genitalia; phylogenetics); Spinelli 1983: 17 (description of pupa); Spinelli and Wirth 1993: 67 (in list of Argentine Ceratopogonidae; distribution); Spinelli 1998: 326 (in list; Argentina); Borkent and Wirth 1997: 130 (in World catalogue); Borkent and Spinelli 2000: 62 (record from the south of United States in New World catalogue);

Borkent and Spinelli 2007: 95 (in Neotropical catalogue); Borkent 2015: 165 (in online World catalogue).

*Ceratopogon magnus* Coquillett 1905: 61 (female; United States, Texas).

*Johannseniella magna* (Coquillett 1905): Malloch 1914b: 227 (in key; combination).

*Johannsenomyia magna* (Coquillett 1905): Malloch 1915: 333 (in key; combination);

Johannsen 1943: 784 (in list of North American Ceratopogonidae); Wirth, 1959: 52 (synonymy).

*Johannsenomyia latifemoris* Ingram and Macfie 1931: 231 (female; Argentina); Macfie 1940: 75 (description of male); Wirth, 1959: 52 (synonymy).

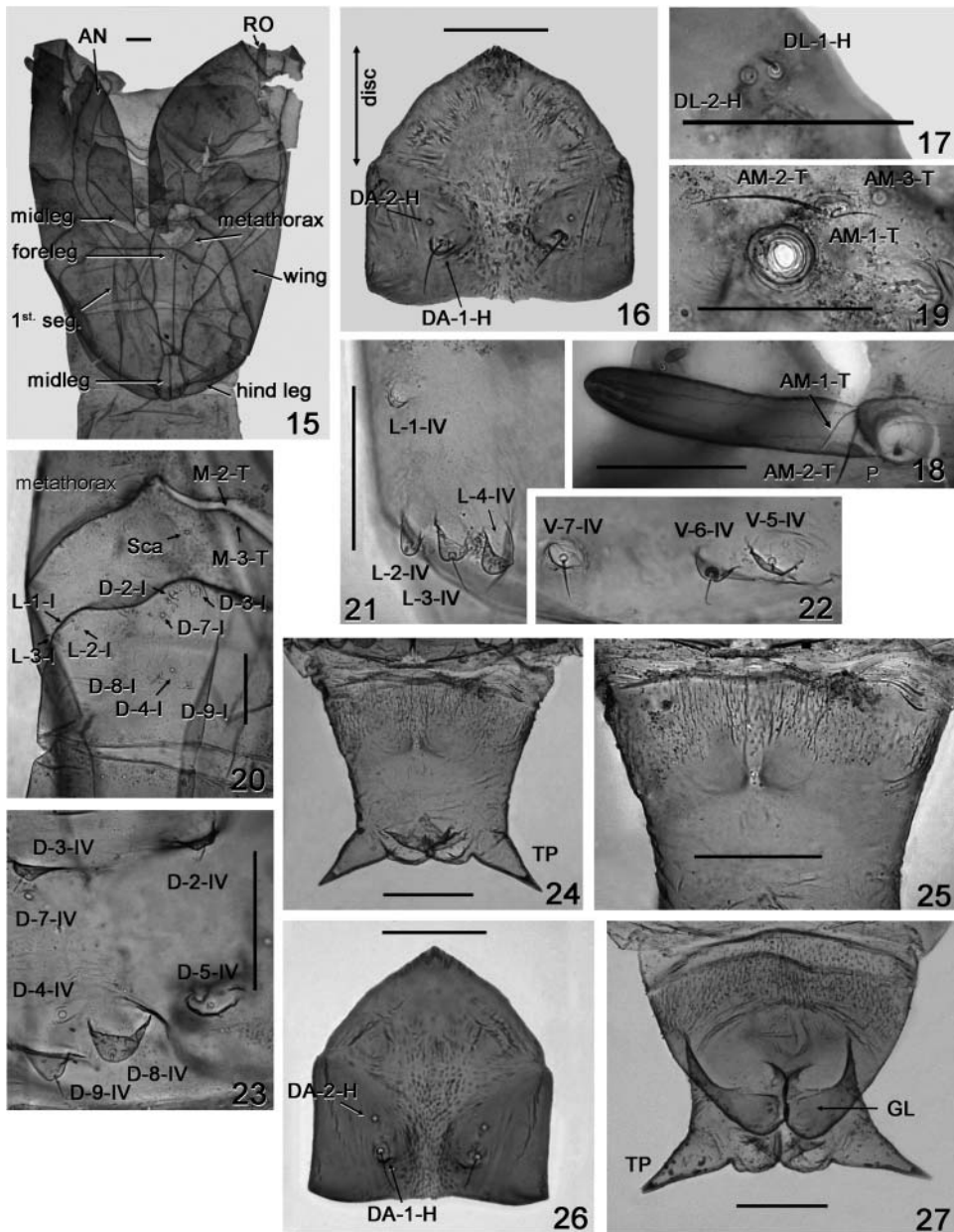
### **Specimens examined**

1 ♂, 1 ♀ (with pupal exuviae), Argentina, Buenos Aires Province, Magdalena, Zapata stream, 35°08'29.55"S, 57°26'32.17"W, elevation 32 m, 20.I.1982, leg. A.L. Estévez (MLPA); 1 ♀ (with pupal exuviae), Argentina, Entre Ríos Province, Santa Ana, 30°54'18.67"S, 57°56'32.17"W, elevation 6 m, 9.XI.1984, leg. Balseiro and Spinelli (MLPA); 1 ♂ (with pupal exuviae), Uruguay, Artigas, Lenguazo stream and National Route 3, 30°26'18.34"S, 57°39'02.85"W, elevation 62 m, 8.XI.1984, leg. Spinelli and Balseiro (MLPA).

### **Description of female pupa (Figures 1–8, 11–14)**

Total length 6.39–6.45 mm (6.42 mm,  $n = 2$ ). General colouration of exuviae brown.

**Cephalothorax:** rectangular, length 2.34–2.64 mm (2.49 mm,  $n = 2$ ), width 1.71 mm ( $n = 2$ ), with small medial crest, surface covered with small spinules. Dorsal apotome (Figure 5) with disc 2.30 times as broad as long, disc surface with scattered, small, rounded tubercles; without dorsomedial tubercle and central dome; posterior margin rounded, with prominent rounded tubercles; anterior margin devoid of tubercles, concave, each side of anteromesal portion with pair of smooth raised areas, with two dorsal apotome sensilla (Figure 5) as follows: DA-1-H long, thin seta located on a well-developed tubercle, DA-2-H campaniform sensillum at tubercle base; DAL 0.18 mm ( $n = 2$ ); DAW 0.41–0.46 mm (0.43 mm,  $n = 2$ ); DAW/DAL 2.26–2.53 (2.40,  $n = 2$ ). Antenna elongate, apex extending posteriorly to various points along anterior margin of wing; mouthparts small, restricted to area anterior to forecoxae/trochanters; apex of labrum truncate, mandible present, palpus sclerotised, wide at base, pointed (Figure 11). Sensilla as follows: two dorsolateral cephalic sclerite sensilla (Figure 3): DL-1-H minute seta, DL-2-H peg on a flattened small tubercle; three anteromedial sensilla on one tubercle (Figures 1 and 2): AM-1-T -AM-2-T long, thin setae on a slightly elevated tubercle, AM-3-T campaniform sensillum; one anterolateral sensillum: AL-1-T minute seta (Figure 4); five dorsals present (Figure 12): D-1-T, D-4-T, D-5-T long, thin setae, D-2-T without visible seta, D-3-T campaniform sensillum, supraalar 2 present. Respiratory organ (RO) (Figure 15) brown, tubular, 3.24 times as long as broad, surface reticulated, with 18–20 apical pores; RO length 0.42–0.43 mm (0.43 mm,  $n = 2$ ), RO width 0.10 mm ( $n = 2$ ); pedicel (Figures 1 and 2)



**Figures 15–27.** *Clastrieromyia dycei* Spinelli and Grogan, 1986. Female pupa: (15) cephalothorax (ventral view); (16) dorsal apotome and dorsal apotome sensilla (DA-H); (17) dorsolateral cephalic sclerite sensilla (DL-H); (18) respiratory organ (RO), detail of pedicel (P) and anteromedial sensilla (AM-T); (19) detail of anteromedial sensilla (AM-T); (20) metathorax and abdominal segment 1, chaetotaxy; (21) abdominal segment 4, chaetotaxy (lateral view); (22) abdominal segment 1, chaetotaxy (ventral view); (23) abdominal segment 4, chaetotaxy (dorsal view); (24) segment 9, terminal processes (TP); (25) segment 9, detail of ventral surface. Male pupa: (26) dorsal apotome and dorsal apotome sensilla (DA-H); (27) segment 9, terminal processes (TP) and genital lobes (GL). Scale bars 0.05 mm.

smooth, annulated, medium-sized, pedicel length 0.07 mm ( $n = 2$ ), P/RO 0.17 ( $n = 2$ ). Two clypeal/labrals (Figure 11), CL-1-H long, thin seta, CL-2-H medium-sized, thin seta; two ocular sensilla (Figure 11): O-2-H campaniform sensillum, O-3-H short seta. Metathorax with only one campaniform sensilla (M-3-T) situated at least one-third the length of the metathorax from its anterior margin.

**Abdomen:** pale brown, surface with small pointed spinules. Segment 1 (Figure 13) with setae as follows: D-2-I short, stout seta, D-3-I long seta on a small tubercle, one D-7-I campaniform sensillum, three setae on posteromesal portion, D-4-I, D-5-I campaniform sensilla, D-8-I, D-9-I medium-sized setae; three lateral setae: L-1-I spur on a strong, triangular tubercle, L-2-I short, curved, thin seta; L-3-I campaniform sensillum at base of L-2-I. Segment 4 with sensillar pattern (Figure 14) as follows: D-1-IV absent, D-2-IV, D-3-IV short setae on a small tubercle, D-4-IV campaniform sensillum, D-5-IV short, thin seta, D-7-IV not visible, D-8-IV minute seta on a stout, triangular tubercle, D-9-IV medium-sized, thin seta on a stout triangular tubercle; L-1-IV, L-2-IV, L-3-IV, L-4-IV short, thin setae, L-1-IV, L-2-IV located on a small rounded tubercle, L-3-IV, L-4-IV located on a triangular stout pointed tubercle; three ventral setae, V-5-IV minute, thin seta on a rounded, stout tubercle, V-6-IV medium-sized, thin seta on a small rounded tubercle, V-7-IV short, stout seta on a small tubercle. Segment 9 (Figures 6–8) length 0.54–0.61 mm (0.58 mm,  $n = 2$ ), width 0.34–0.35 mm (0.34 mm,  $n = 2$ ), ventral, dorsal surfaces covered with abundant small pointed spinules (Figures 7 and 8), anterior portion of ventral surface with narrow band of longitudinal wrinkles, terminal process short, ventral surface with scattered minute spinules, one small star-shaped mark centred on wide bare area of mesal portion, dorsal surface with admedian small rounded areas without spinules (Figure 8); terminal processes moderately divergent, tip dark, pointed (Figure 6); length 0.25–0.30 mm (0.28 mm,  $n = 2$ ); basal width 0.07–0.08 mm (0.08 mm,  $n = 2$ ).

### Description of male pupa (Figures 9 and 10)

Similar to female with the following notable differences. Total length 4.95–6.27 mm (5.61 mm,  $n = 2$ ). Exuviae pale brown. Dorsal apotome 1.90 times as broad as long (Figure 9), surface covered with small rounded tubercles; posterior margin rounded, tip pointed, anterior margin without tubercle, concave; DAL 0.22 mm; DAW 0.34 mm; DAW/DAL 1.55. Respiratory organ length 0.37–0.38 mm (0.38 mm,  $n = 2$ ); width 0.06–0.10 mm (0.08 mm,  $n = 2$ ); pedicel length 0.04–0.06 mm (0.05 mm,  $n = 2$ ); P/RO 0.10–0.16 (0.13 mm,  $n = 2$ ). Cephalothorax length 1.95–2.25 mm (2.10 mm,  $n = 2$ ), width 1.53. Segment 9 (Figure 10) with dorsal, ventral surfaces covered with small posteriorly directed spinules, ventral genital lobes short, not extending far beyond posterior margin, smooth, greatly appressed, surface wrinkled, length 0.52–0.58 mm (0.55 mm,  $n = 2$ ), width 0.29–0.30 mm (0.29 mm,  $n = 2$ ), terminal process (Figure 10) length 0.26–0.34 mm (0.30 mm,  $n = 2$ ), width 0.07–0.08 mm (0.08 mm,  $n = 2$ ), tip darkish, pointed.

### Comparative notes

The paired anteromedial sensilla (AM-1-T, AM-2-T) of the pupa of *Pachyhelea pachymera* are elongated and thin, as it is typical in the tribe Palpomyiini.

Wirth (1959) and Grogan and Wirth (1979, 1980) noted the resemblance of *P. pachymera* with species in the *Palpomyia tibialis* group, especially for adult features, e.g., the wing, with two radial cells and costa extending to 0.80 or more of the wing length but not



to tip, the hind femur swollen, the tarsomeres 5 with 1–3 pairs of stout ventrolateral bristle-like setae, the sternite 9 of male distinctly broader than long, the gonocoxite elongate and slightly curved, the paramere halves with slender stem, with subapical scalpel-shaped swelling and then abruptly narrowing to slightly curved, pointed tip. However, the known pupae of American species in the *P. tibialis* group differ from *P. pachymera* in their dorsal apotome disc pointed anteriorly and longer than wide in the female (concave anteriorly and broader than long in *P. pachymera*), its surface covered by stout rounded tubercles (smaller tubercles in *P. pachymera*), the medium-sized dorsal apotome sensillum DA-1-H on a small tubercle (long, thin seta on a well-developed tubercle in *P. pachymera*), the dorsal apotome sensilla DA-1-H narrowly separated (broadly separated in *P. pachymera*), and in the short divergent terminal processes on segment 9 (only moderately divergent in *P. pachymera*).

### **Distribution**

The United States (Texas), Mexico, Brazil (Amazonas, Mato Grosso, Rio de Janeiro States), Uruguay (Artigas Department), Argentina (Entre Ríos, Buenos Aires Provinces).

### ***Clastrieromyia dycei Spinelli and Grogan 1986* (Figures 15–31)**

456 (male, female, pupa; Uruguay); Borkent and Wirth 1997: 129 (in World catalogue); Borkent and Spinelli 2000: 62 (record from the south of United States in New World catalogue); Spinelli 2000: 70 (Argentina records); Borkent and Spinelli 2007: 95 (in Neotropical catalogue); Borkent 2015: 165 (in online World catalogue).

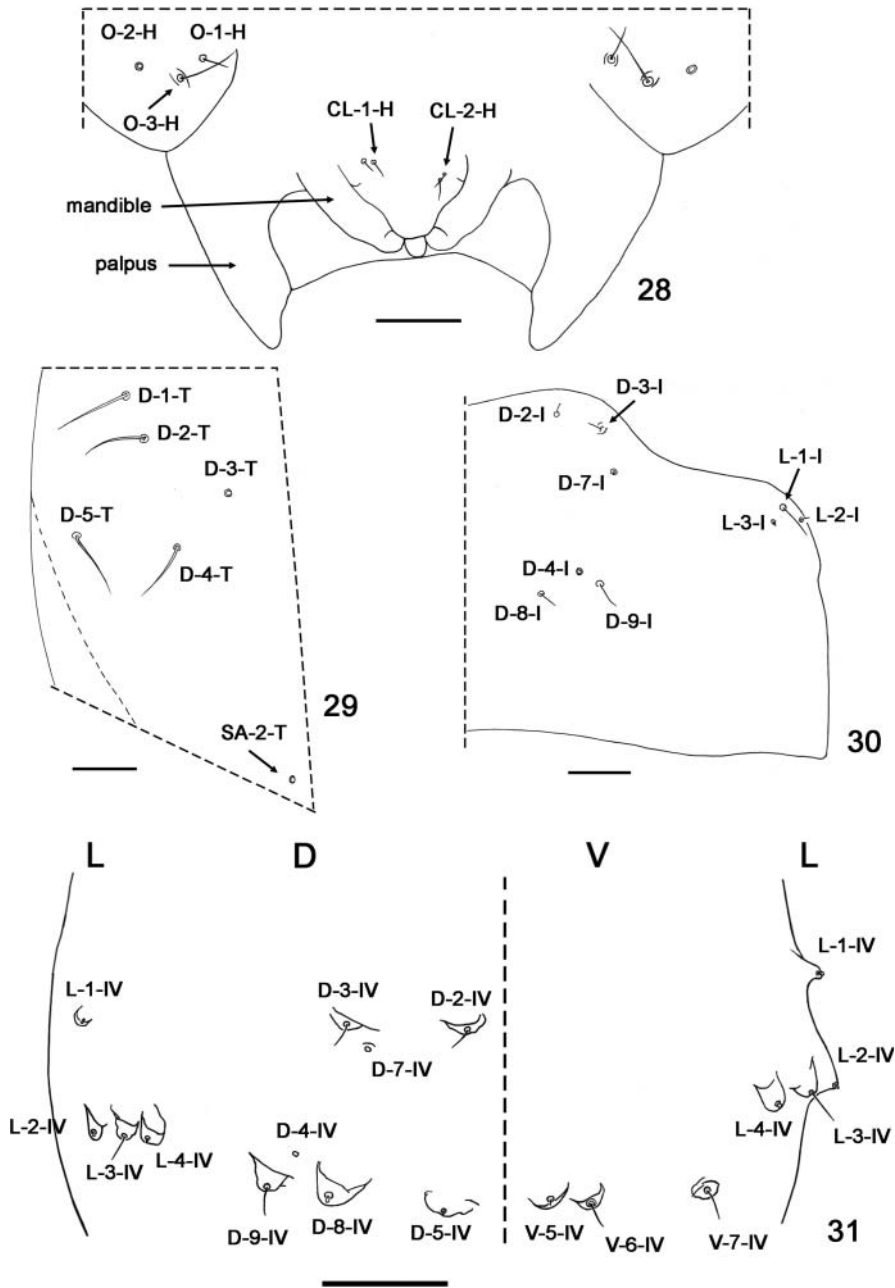
### ***Specimens examined***

2♂, 2♀ (with associated pupal exuviae; holotype ♀, allotype ♂, other 2 paratypes), Uruguay, Tacuarembó Department, Estancia Ipoa, 29.IX.1980, leg. A. Dyce (MLPA).

### ***Description of female pupa* (Figures 15–25, 28–31)**

Total length 3.69–4.02 mm (3.85,  $n = 2$ ). General colouration of exuviae brownish.

***Cephalothorax* (Figure 15):** rectangular, length 1.59–1.74 mm (1.66 mm,  $n = 2$ ), width 1.20–1.29 mm (1.25 mm,  $n = 2$ ), with short medial crest, surface smooth. Dorsal apotome (Figure 16) disc 2.20 times as broad as long, triangular, with possible ventral line of weakness, without a dorsomedial tubercle and central dome; disc surface wrinkled, with scattered, small, rounded tubercles; posterior margin tapering to pointed tip, with small tubercles; anterior margin devoid of tubercles, nearly straight, surface smooth with few small tubercles medial to and posterior of DA-H, each side of anteromesal portion with pair of smooth raised areas, with two dorsal apotome sensilla (Figure 16): DA-1-H long, thin seta located on a small, rounded tubercle, DA-2-H campaniform sensillum at the tubercle base; DAL 0.14–0.19 mm (0.17 mm,  $n = 2$ ); DAW 0.26–0.31 mm (0.29 mm,  $n = 2$ ); DAW/DAL 1.62–1.83 (1.72,  $n = 2$ ). Antenna elongate, apex extending posteriorly to various points along anterior margin of wing, mouthparts small, restricted to area anterior to forecoxae/trochanters; apex of labrum truncate, mandible present, palpus broad at base (Figure 28). Sensilla as follows: two dorsolateral cephalic sclerite sensilla (Figure 17): DL-1-H minute seta, DL-2-H campaniform sensillum on a flattened small tubercle; three



**Figures 28–31.** *Clastriomyia dycei* Spinelli and Grogan, 1986. Female pupa: (28) details of mouthparts, clypeal/labral sensilla (CL-H) and ocular sensilla (O-H); (29) dorsal setae (D-T), supraalar (SA-T); (30) abdominal segment 1, chaetotaxy (dorsal view); (31) abdominal segment 4, chaetotaxy (dorsal and ventral view), with detail of setae and tubercles. Scale bars 0.05 mm.

anteromedial sensilla on one tubercle (Figures 18 and 19): AM-1-T, AM-2-T long, thin setae, AM-3-T campaniform sensillum on a slightly elevated tubercle; one anterolateral sensillum: AL-1-T short, stout seta; five dorsals present (Figure 29): D-1-T, D-2-T, D-4-T,

D-5-T long, stout setae, D-3-T campaniform sensillum, supraalar (SA-2-T) present. Respiratory organ (Figures 15, 18) brown, short, four times as long as broad, surface smooth with distinct internal annulations, with 9–10 apical pores; RO length 0.42–0.43 mm (0.43 mm,  $n = 2$ ), RO width 0.10 mm ( $n = 2$ ); pedicel (Figure 18) smooth, very short, pedicel not measurable. Two clypeal/labral (Figure 28), CL-1-H medium-sized, thin seta, CL-2-H short, thin seta; three ocular setae (Figure 28): O-1-H medium-sized, thin seta, O-3-H, long, thin seta, O-2-H campaniform sensillum. Metathorax with M-2-T medium-sized, thin seta, M-3-T single campaniform sensillum (Figures 15, 20) situated at least one-third the length of the metathorax from its anterior margin.

**Abdomen:** pale brown, surface smooth. Segment 1 (Figures 15, 20, 30) with setae as follows: D-2-I, D-3-I short, thin setae, D-7-I campaniform sensillum, three setae on postero-mesal portion, D-4-I campaniform sensillum, D-8-I short seta, D-9-I medium-sized seta; three lateral setae: L-1-I long, thin seta, L-2-I-short seta, L-3-I minute seta. Segment 4 with sensillar pattern (Figures 21–23, 31) as follows: all setae on rounded tubercles, D-1-IV absent, D-2-IV, D-3-IV medium-sized, thin setae, D-4-IV campaniform sensillum, D-5-IV minute seta, D-7-IV campaniform sensillum, D-8-IV peg, D-9-IV medium-sized, thin seta; L-1-IV, L-2-IV, L-4-IV pegs, L-3-IV medium-sized, thin seta; three ventral setae, V-5-IV minute seta, V-6-IV, V-7-IV medium-sized, thin setae. Segment 8 without L-I-VIII. Segment 9 (Figures 24 and 25) length 0.26–0.28 mm (0.27 mm,  $n = 2$ ), width 0.30–0.31 mm (0.306 mm,  $n = 2$ ), dorsal and ventral surfaces smooth, anterior portion of ventral surface with band of longitudinal wrinkles and spinules, one small, bare, hour-glass-shaped area located mesally on widest portion of the segment (Figure 25); terminal process short, divergent, surface bare, tip heavily sclerotised, pointed (Figure 24); length 0.07–0.08 mm (0.07 mm,  $n = 2$ ); basal width 0.05–0.06 mm (0.05 mm,  $n = 2$ ).

#### **Description of male pupa (Figures 26 and 27)**

Similar to female with the following notable differences. Total length 3.09–3.96 mm (3.52 mm,  $n = 2$ ). Exuviae pale brown. Dorsal apotome 1.70 times as broad as long (Figure 26), surface covered with small rounded tubercles, as figured; posterior margin rounded, tip pointed, anterior margin concave, devoid of tubercles; DAL 0.14 mm; DAW 0.24 mm; DAW/DAL 1.66. Respiratory organ length 0.18–0.23 mm (0.20 mm,  $n = 2$ ); width 0.06 mm ( $n = 2$ ). Cephalothorax length 1.08–1.59 mm (1.33 mm,  $n = 2$ ), width 0.96–1.20 mm (1.08 mm,  $n = 2$ ). Segment 9 (Figure 27) ventral surface with band of posteriorly directed small spinules; ventral genital lobe short, not reaching posterior margin, surface smooth, slightly wrinkled, length 0.25 mm ( $n = 2$ ), width 0.29–0.31 mm (0.30 mm,  $n = 2$ ), terminal process (Figure 27) length 0.09–0.10 mm (0.10 mm,  $n = 2$ ), width 0.05 mm ( $n = 2$ ), tip darkish, pointed.

#### **Comparative notes**

The pupa of *C. dycei* possesses features of other genera of Palpomyiini, such as the presence of two elongate and slender anteromedial sensilla (AM-1-T, AM-2-T) and one AM-3-T campaniform sensillum. However, this species exhibits some characters that are absent in other species of the tribe, like the D-3-I very close to D-7-I, the abdominal segment 4 with all setae on rounded tubercles, and the abdominal segment 8 without L-I-VIII.

## Distribution

Argentina (La Pampa, Buenos Aires Provinces), Uruguay (Tacuarembó Department).

## Acknowledgements

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## Disclosure statement

No potential conflict of interest was reported by the authors.

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