

Research article

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New records of big-headed flies (Diptera: Pipunculidae) from the Mediterranean Basin

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Abstract. Despite great progress in Pipunculidae (Insecta: Diptera) systematics during the past decades, the Mediterranean fauna of big-headed flies remains largely unknown. Here, we present new faunistic and taxonomic data for 98 named species from Cyprus, Egypt, France, Greece, Italy, Malta, Morocco, Portugal, Spain, Tunisia, and Turkey, based on our own collecting efforts and museum specimens. Besides 56 first national records, the paper includes the description of *Cephalops (Semicephalops) brachium* Kehlmaier & Withers sp. n. from France and Spain, and of *Tomosvaryella osito* Kehlmaier, Gibbs & Withers sp. n. and *Tomosvaryella pugiunculus* Kehlmaier & Gibbs sp. n. from the Balear Islands (Spain). Furthermore, two new synonymies are proposed: *Tomosvaryella lyneborgi* (Coe, 1969) = *Tomosvaryella ciliaris* (Strobl, 1910); and *Tomosvaryella glabrum* (Adams, 1905) = *Tomosvaryella pilosiventris* (Becker, 1900). Lectotypes are designated for *Tomosvaryella pilosiventris* (Becker, 1900) and *Tomosvaryella vicina* (Becker, 1900). The following species need to be deleted from the Spanish checklist due to misidentifications: *Cephalops subultimus* Collin, 1956, *Eudorylas montium* (Becker, 1897), and *Tomosvaryella nigronitida* Collin, 1958.

Key words. Diptera, Pipunculidae, Mediterranean Basin, taxonomy, faunistics, new species.

INTRODUCTION

Pipunculidae (Insecta: Diptera), commonly known as big-headed flies, are brachycerous flies whose endoparasitic larvae develop within larval and adult Auchenorrhyncha (Insecta: Hemiptera) and adult Tipulidae (Insecta: Diptera) (see Rafael & Skevington 2010 for a brief review of the family's biology). Currently, four subfamilies are recognized (Kehlmaier et al. 2014) and slightly more than 1,400 valid species are described (Rafael & Skevington 2010). Whereas pipunculids can readily be recognized by their large compound eyes, occupying almost the entire globular head (Fig. 1), species identification is primarily based on male genitalic features and the piercer-like shape of the female ovipositor used for penetrating the intersegmental skin of their larval hosts; and thus, it requires some experience.

Regarding taxonomy and systematics, vast progress has been achieved during the past three decades. Many revisionary works, covering all biogeographic regions, have more than doubled the number of described species (Skevington & De Meyer 2004: fig. 1). Although the

western Palaearctic can be considered the most thoroughly studied region worldwide, knowledge of the fauna of the Mediterranean Basin is still fragmentary. Being located at the intersection of the African and the Eurasian landmasses the Mediterranean Basin is considered one of the world's biodiversity hotspots (Cuttelod et al. 2008). It stretches from Portugal to Jordan (W to E) and from northern Italy to Morocco (N to S), including around five thousand islands scattered around the Mediterranean Sea, plus the Macaronesian archipelagos of the Canaries, Madeira, the Selvages (Selvagens), the Azores, and Cape Verde. In this study, however, the Macaronesian archipelagos are not considered.

Although no absolute figures exist, the high degree of plant endemism – approx. 52% of all 22,500 vascular plant species, mainly concentrated on islands, peninsulas, rocky cliffs, and mountain peaks (International 2011) – has undoubtedly triggered radiations within many groups of arthropods, including endoparasitoids. Although much of the Mediterranean hotspot was once covered in evergreen oak forests, deciduous and conifer forests, eight thousand years of human settlement and habitat modifica-

tion have distinctly altered the characteristic vegetation (International 2011). Today, the most widespread vegetation type is hard-leaved or sclerophyllus shrublands called maquis or matorral, which include representatives from the plant genera *Juniperus* L., *Myrtus* L., *Olea* L., *Phillyrea* L., *Pistacia* L., and *Quercus* L. (International 2011).

Of all countries situated in the Mediterranean Basin, only France (Withers 2006), Israel (De Meyer 1995), Italy (Kozánek & Belcari 1995; Kehlmaier 2008a; Kehlmaier 2010a), Malta (Ebejer 2012), Portugal (Kehlmaier & Andrade 2016), and Spain (De Meyer 1997; Kehlmaier 2001, 2003, 2005a; Kehlmaier & Assmann 2008; Kehlmaier & Alonso-Zarazaga 2018) have received more substantial attention in the past, resulting in well documented, yet far from complete species lists. During the past years, the authors had the opportunity to collect new material as well as to study specimens deposited in various institutional and private collections. The results of these efforts are presented in this paper, and include, amongst others, the description of three new species (i.e., *Cephalops (Semicephalops) brachium* Kehlmaier & Withers sp. n., *Tomosvaryella osito* Kehlmaier, Gibbs & Withers sp. n., and *Tomosvaryella pugiuunculus*

Kehlmaier & Gibbs sp. n.) and new records and findings for Cyprus, Egypt, France, Greece, Italy, Malta, Morocco, Portugal, Spain, Tunisia, and Turkey. Moreover, lectotypes are designated for *Tomosvaryella pilosiventris* (Becker, 1900) and *Tomosvaryella vicina* (Becker, 1900), and two new synonymies are proposed: *Tomosvaryella lyneborgi* (Coe, 1969) = *Tomosvaryella cilitarsis* (Strobl, 1910), and *Tomosvaryella glabrum* (Adams, 1905) = *Tomosvaryella pilosiventris* (Becker, 1900).

MATERIAL AND METHODS

Morphological terminology in the descriptive part follows recent systematic papers (e.g., Kehlmaier et al. 2014). Note that in contrast to previous papers (e.g., Kehlmaier 2005a) using the terms ‘inner’ and ‘outer’ to differentiate between the position of surstyli, gonopods and sides of the epandrium, the terms ‘left’ and ‘right’ are used in accordance with Skevington (2002), representing the actual morphological location of these structures.

As no comprehensive work exists for identifying Pipunculidae from the Mediterranean Basin, various publications need to be consulted for species identification,

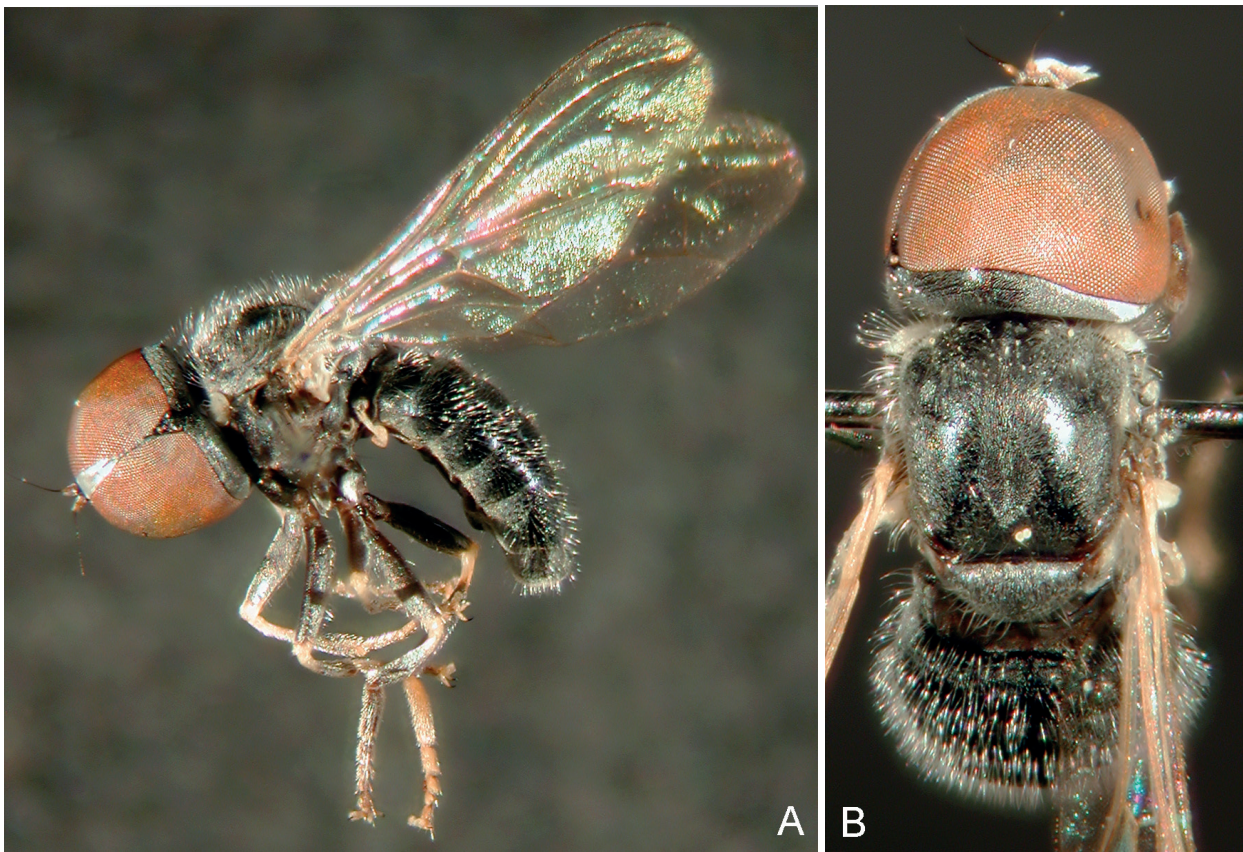


Fig. 1. Male holotype of *Tomosvaryella osito* Kehlmaier, Gibbs & Withers sp. n. prior to dissection. **A.** Left lateral view. **B.** Dorsal view.

i.e., for Chalarinae (Kehlmaier 2006; Kehlmaier & Assmann 2008; Kehlmaier 2010b); for Nephrocerinae (Grootaert & De Meyer 1986); for Pipunculini (Kehlmaier 2008b, 2010a); for Cephalopsini and Microcephalopsini (Ackland 1993; De Meyer 1989; Kehlmaier & Andrade 2016); for Eudorylini (Kehlmaier 2005a, b); and for Tomosvaryellini (Albrecht 1990; De Meyer 1993, 1995; Földvári & De Meyer 2000; Kehlmaier 2008a, b). An identification key to the world genera is included in Skevington & Yeates (2001). If not otherwise stated, the material was identified by the senior author.

For selected specimens, DNA-barcodes of the mitochondrial coding gene cytochrome oxidase subunit I (COI) were generated using the protocol by Kehlmaier et al. (2012) at the molecular laboratory at Senckenberg Naturhistorische Sammlungen Dresden, Museum für Tierkunde, Dresden, Germany (SGN-SNSD-Mol-Lab). Specimens sequenced received an additional label stating an individual lab number “DNA CKxxx”. Sequence accession numbers issued by the European Nucleotide Archive (ENA) are provided in the individual species section.

In the faunistic listing below, genera and species are arranged alphabetically within their corresponding subfamily. First national records are indicated by an asterisk (*) after the country's name.

Abbreviations used for collections and equivalents

BMNH	=	British Museum of Natural History, London, United Kingdom
MNCN	=	Museum Nacional de Ciencias Naturales, Madrid, Spain
MNHN	=	Muséum National d'Histoire Naturelle, Paris, France
MNHU	=	Museum für Naturkunde, Berlin, Germany
SMTD	=	Senckenberg Naturhistorische Sammlungen Dresden, Museum für Tierkunde, Dresden, Germany
MVHN	=	Museu Valencià d'Història Natural, Fundació Entomològica Torres Sala, Valencia, Spain
OUMNH	=	Oxford University Museum of Natural History, Oxford, United Kingdom
PCCK	=	Personal collection Christian Kehlmaier, Dresden, Germany
PCCP	=	Personal collection Chris J. Palmer, Hampshire, United Kingdom
PCDG	=	Personal collection David J. Gibbs, Weston-super-Mare, United Kingdom
PCJC	=	Personal collection Jocelyn Claude, Labergement-Sainte-Marie, France.
PCME	=	Personal collection Martin J. Ebejer, Cowbridge, United Kingdom

PCNV	=	Personal collection Nikita Vikhrev, Moscow, Russia.
PCPC	=	Personal collection Peter J. Chandler, Melksham, United Kingdom
PCPW	=	Personal collection Phil Withers, Sainte Euphémie, France.
ZMUC	=	Zoological Museum, University of Copenhagen, Denmark.

Other abbreviations used in the text

MT	=	Malaise trap
ZMCE	=	Zoological Museum Copenhagen Expedition

In order to study the ventral aspect of the male terminalia, the syntergosternite 8 was separated from the abdomen and placed on a microscope slide in a drop of glycerine. Illustrations were prepared by merging several microphotographs, taken with a Nikon Coolpix 990 in different planes at a magnification of 250 times, using CombineZP (by Alan Hadley; <http://www.hadleyweb.pwp.blueyonder.co.uk>), before redrawing them with Inkscape (Inkscape Community; <http://www.inkscape.org>).

The studied material originates from our own collecting efforts or has been compiled by various institutions or individuals during Malaise trap projects or collecting trips, e.g., the Wetland Kerkini Biodiversity Study (courtesy of Gordon J. Ramel, <http://www.ramel.org/lake-kerkini/>, 41°10'46"N 23°9'20"E) in Kendriki Makedonia, Greece, and The Albufera International Biodiversity Project (TAIB, courtesy of Nick J. Riddiford, <https://www.taib.info/en/>, 39°47'50"N 3°6'22.5"E) in Mallorca, Spain. These and additional localities are listed in more detail (where available) in Appendix I.

Species records formerly presented in so-called “grey literature”, e.g., the Annual Reports of the TAIB project (Riddiford 2006; Riddiford & Ferriz 2007), are included in this study whereas records published in scientific journals holding an “International Standard Serial Number” (ISSN) are referred to in Appendix II.

RESULTS

Description of new species

Cephalops (Semicephalops) brachium Kehlmaier & Withers sp. n.

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Figs 2A–G

Differential diagnosis. The species can be differentiated by the male genitalia with its elongated surstyli and the long dorsal arm of the phallic guide. The female is characterised by its small ovipositor that is pointing away from the sternites. It is not clear at present to which spe-

cies *C. brachium* is closely related to, as the long dorso-medial arm of the phallic guide and the elongated surstyli are unique within *Cephalops* (*Semicephalops*) Fallén, 1810.

Description. MALE. Body length: about 3.6–3.7 mm (head and terminalia detached in holotype). **Head.** Scape and pedicel dark brown, flagellum yellowish. Pedicel with three short dorsal bristles and 3–4 longer ventral bristles, the longest almost reaching the tip of flagellum, which is pointed below. Arista dark brown with broadened base. Eyes meeting for length of frons (14 ommatidial facets), which is silver pollinose. Occiput brown pollinose in upper quarter, otherwise grey pollinose. **Thorax.**

Postpronotal lobe same colour as scutum. Prescutum, scutum and scutellum dark brown and brown pollinose. Propleural hair fringe with six long hairs. Prescutum and scutum with two dorsocentral rows of minute hairs. Posterior hair fringe of scutellum minute. Wing length: 3.9–4.2 mm. Wing width: 1.3–1.4 mm. Length of third costal section (LTC) 1.1–1.3 times length of fourth costal section (LFC). Pterostigma as long as LTC. Wing covered with microtrichia. Only small basal cells of wing, e.g., bc, and beginning of cells sc, c, r₁, br and bm with reduced microtrichia. Crossvein r-m reaches cell dm at basal third of the cell's length. Halter white but narrowly brownish at base and partly dorsally on knob. Coxae dark brown. Trochanters yellow. Fore and mid femora

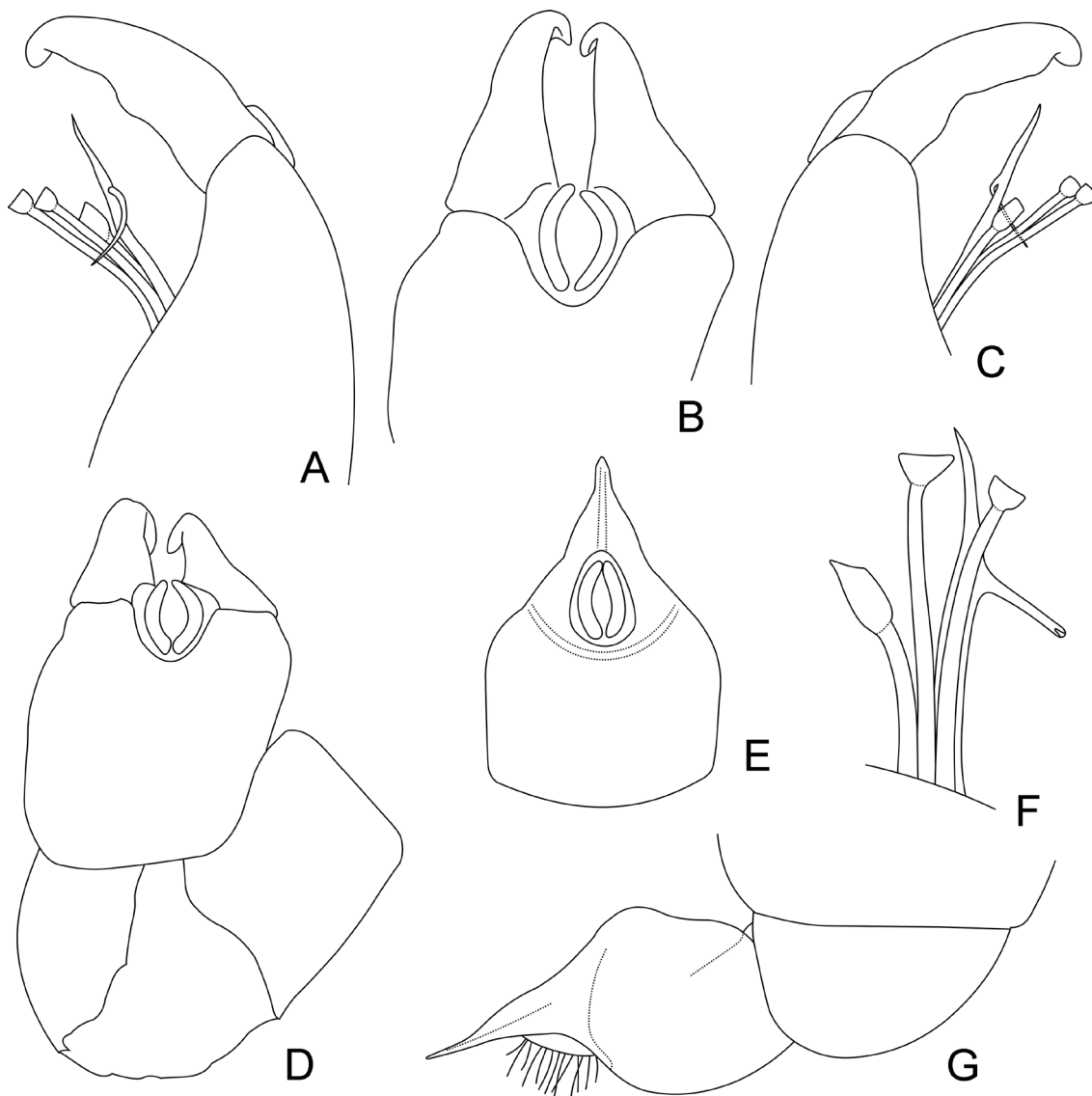


Fig. 2. *Cephalops* (*Semicephalops*) *brachium* Kehlmaier & Withers sp. n. **A.** Right lateral view of male terminalia. **B.** Strictly dorsal view of surstyli. **C.** Left lateral view of male terminalia. **D.** Dorsal view of sytergosternite 8 with membranous area, epandrium and surstyli. **E.** Dorsal view of ovipositor. **F.** Ventral view of phallic guide and phallus. **G.** Left lateral view of ovipositor.

yellow with weak brownish tinge anterodorsally in basal half. Hind femur yellow with stronger brownish tinge in anterior half (anterior, dorsal and ventral). Fore femur with antero- and posteroventral rows of black spines at apex consisting of one to four spines. Mid femur with antero- and posteroventral rows of black spines consisting of 7–10 spines in apical two thirds. Hind femur with anteroventral row of four peglike spines in anterior third. Hind femur shining posteroventrally. Tibiae yellow. Hind tibia with four longer hairs anteromedially. Tarsi yellow with ditarsus brown. Pulvilli shorter than distitarsus. **Abdomen.** All tergites dark brown, lacking distinct hairs except tergite 1 with 3–4 hairs laterally. **Genitalia:** Dark brown. Membranous area narrowly reaching epandrium (Fig. 2D). Surstyli in strictly dorsal view elongated, rather symmetric; right surstylus slightly longer (Fig. 2B). In lateral view gently bent towards sternites (Figs 2A, 2C). Phallus trifold with one short and two longer ejaculatory ducts with cupular apices (Fig. 2F). Phallic guide ankyroid with a long dorsomedial arm wrapping around the ejaculatory ducts (Fig. 2F). **FEMALE.** Body length: 3.0 mm. Differing from male by eyes separated, with enlarged anterior facets. Frons broadest at its middle where four times wider than diameter of largest ommatidial facet. Wing length: 3.7 mm. Wing width: 1.6–1.7 mm. Legs can be entirely yellow. Femora with slightly reduced ventral rows of dark peg-like spines. Pulvilli on fore and mid leg as long as distitarsus, slightly shorter on hind **Genitalia:** Ovipositor in dorsal view (Fig. 2E) with base (tergite 7) dark brown, almost quadratic, and piercer (tergite 9) yellow, as long as base and with triangular lateral flanges. In lateral view (Fig. 2G), base with convex dorsal and ventral margin; piercer straight and pointing away from sternites; reaching to posterior margin of sternite 4.

Type material. **HOLOTYPE** ♂ (DNA CK914, ENA LT999991), **FRANCE:** Département Ardèche, Réserve Naturelle Nationale des Gorges de l'Ardèche, TM n°12, Malaise, 19.vi.2016, J. Claude [SMTD]. **PARATYPES:** same data as holotype [1♂, PCJC]; Département Ardèche, Granzon, river bank, 25.v–27.vi.2010, P. Withers [1♂, PCPW]. **Additional material.** **SPAIN:** “VD19”, D. Ventura [1♀, SMTD]; same data as previous [2♂♂ 1♀, PCKK].

Remarks. The additional material from Spain was excluded from the type series due to the fragmentary locality data.

Etymology. The species epithet *brachium* is Latin for ‘arm’ or ‘forearm’, referring to the long arm or dorsomedian projection of the phallic guide. The specific epithet is to be treated as a noun in apposition.

***Tomosvaryella osito* Kehlmaier, Gibbs & Withers sp. n.**

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Figs 1A–B, 3A–G

Differential diagnosis. The new species is unique within *Tomosvaryella* Aczél, 1939 for its pilose appearance in both sexes (Figs 1A–B). Based on the male terminalia, *T. osito* sp. n. belongs to the *minima* species group that comprise *T. minima* (Becker, 1897), *T. hortobagyensis* Földvári & De Meyer, 2000, *T. resurgens* De Meyer (1997), and *T. sepulta* De Meyer (1997). The latter two species were originally described from mainland Spain and the shape of the surstyli resembles especially to *T. sepulta*. However, the lateral shape of both surstyli is distinctly more angular in *T. osito* sp. n. (Figs 3A and 3C) compared to *T. sepulta*. (De Meyer 1997: figs 12a and 12c).

Description. **MALE.** Body length: 4.0 mm (prior to dissection). **Head.** Scape and pedicel dark brown, the latter with some minute dorsal and ventral bristles. Flagellum yellowish brown and long tapering. Arista with yellowish broadened base, otherwise dark brown. Eyes meeting for less than length of ocellar triangle (four facets). Frons and face densely silver pollinose. Palpus yellowish. Laterally, occiput silver pollinose with some weak brownish pollinosity intermingled in anterior half; upper half twice as broad as lower half. **Thorax.** Postpronotal lobe yellow, densely silver pollinose, with about twelve long hairs. Prescutum and scutum black, weakly silver pollinose, covered with long white hairs along anterior and lateral margins and with two dorsocentral rows that broaden considerably in posterior third. Scutellum black, densely silver pollinose and entirely covered with long white hairs. Subscutellum black and densely silver pollinose. Pleura black, bare, weakly silver pollinose. Wing length: 3.8 mm; width: 1.1 mm. Length of third costal section (LTC) 0.3 times length of fourth costal section (LFC). Pterostigma absent. Wing covered with microtrichia except partly bare in small basal cells, e.g., bc, and beginning of cells sc, c, r₁, br and bm. Crossvein r-m reaches cell dm shortly after the middle of the cell's length. Halter narrowly brown at base, otherwise white. Legs dark brown except yellow at tip of femur and in basal quarter of tibia; silver pollinose except hind femur shining posteroventrally. Hind trochanter without any distinct protuberance or spines. Femora without ventral spines, with posterodorsal and posteroventral row of white hairs, complemented by an anterior row on hind femur. Hind basitarsus flattened. Pulvilli slightly shorter than distitarsus. **Abdomen.** Tergites black, shining but with anterolateral triangular patches of grey pollinosity; evenly covered with long white hairs (Figs 1A–B). Viewed caudally, membranous area placed to the right (Fig. 3E). **Genitalia:** Surstyli in strictly dorsal view rather symmetric, left one slightly longer; both with broad base and

inward bent tips (Fig. 3B). In lateral view, both surstyli are hunchbacked and bent towards sternites (Figs 3A & C). Epandrium elongated, longer than surstyli (Fig. 3B). Phallus with three short ejaculatory ducts; one duct bearing five distinct spines pointing towards the phallic guide (Fig. 3D). Phallic guide inconspicuous, rather long and slim with a slight curve towards the epandrium in lateral view (Fig. 3D). **FEMALE.** Body length: 3.7 mm. Differing from male by eyes separated, with enlarged anterior facets. Frons entirely silver pollinose except in upper quarter, broadest in its middle, five times wider than largest ommatidial facet. Occiput silver pollinose

in lower, weakly silver pollinose in upper half. Pleura densely silver pollinose. Wing length: 3.4–3.5 mm. Wing width: 1.1–1.2 mm. LTC 0.5 times LFC. Leg densely silver pollinose. Anterior femur with two white bristles at base. Tibiae yellow in basal third. Pulvilli as long as distitarsus. Tergite 1–6 laterally silver pollinose, broadest towards anterior margin. **Genitalia:** Ovipositor in dorsal view (Fig. 3G) with base (tergite 7) dark brown, ovate, longer than broad, weakly silver pollinose. Piercer with tergite 8 (around anal opening) dark brown and shining; tergite 9 (the actual piercer) thin, yellowish, shining.

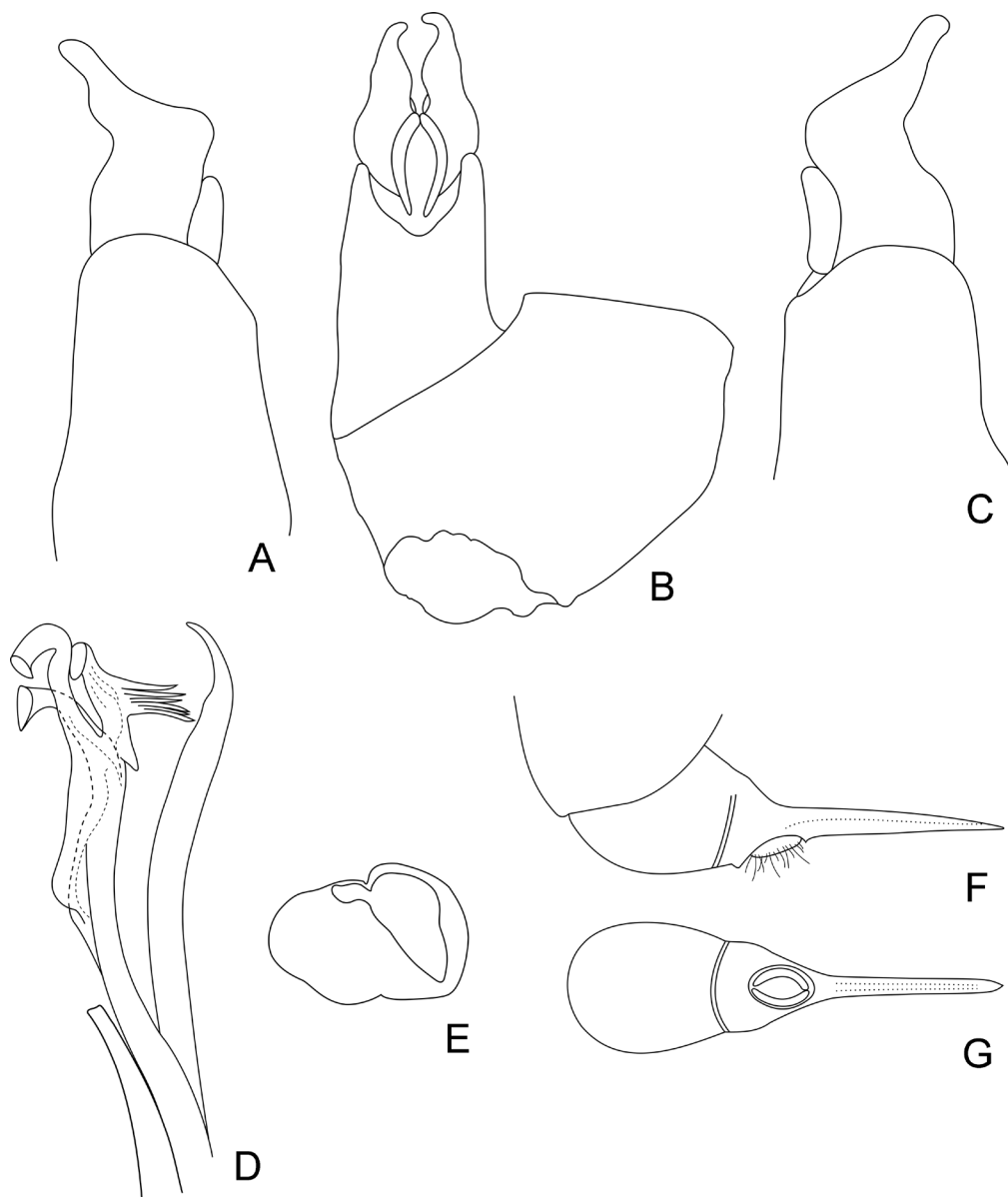


Fig. 3. *Tomosvaryella osito* Kehlmaier, Gibbs & Withers sp. n. **A.** Lateral view of right surstylus. **B.** Strictly dorsal view of surstyli. **C.** Lateral view of left surstylus. **D.** Right lateral view of phallus and phallic guide. **E.** Caudal view of syntergosternite 8. **F.** Right lateral view of ovipositor. **G.** Dorsal view of ovipositor.

Piercer twice length of base. In lateral view (Fig. 3F), piercer straight, reaching posterior margin of sternite 3.

Type material. **HOLOTYPE** ♂, **SPAIN:** Mallorca, S'Albufera, Es Comú, 39°46'34"N 3°08'27"E, 20.v.2007, D.J. Gibbs [SMTD]. **PARATYPES:** same data as holotype [1♂ (dissected), 2♀♀, PCDG]; same data as holotype [1♂, BMNH (not dissected); 2♂♂, OUMNH (not dissected)]; same data as holotype [1♀, PCDG; 1♀, BMNH; 1♀, OUMNH]; same data as holotype, 18.v.2007 [1♂, PCDG; 1♂1♀, BMNH (not dissected)]. **FRANCE:** Aude, Narbonne, Gruissan, dunes à *Tamarix*, 13.vi.2006, B. Nusillard [1♂, PCPW].

Etymology. The species epithet *osito* is Spanish for 'little bear' and refers to the Teddybear-like appearance of the new species. The specific epithet is to be treated as a noun in apposition.

***Tomosvaryella pugiunculus* Kehlmaier & Gibbs sp. n.**

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Figs 4A–I, 5A–C.

Differential diagnosis. The species cannot be attributed to any specific species group at present. Important external features to diagnose this species are the shape of the flagellum in both sexes, with its filiform tip; the shape of the male hind leg with the hollow femur base and the bent tibia; the female ovipositor with its long, straight piercer having weak lateral flanges; and the male terminalia with a peculiar ventrocaudal aspect of the surstyli (rather angular, their distal margin forming a horizontal line; right gonopod larger than left one in ventral view; phallus with three short ducts, one bearing a small hook at its base).

Description. MALE. Length from head to tip of scutellum: 2.1 mm (abdomen missing due to dissection). **Head.** Scape and pedicel dark brown, the latter with some minute dorsal and ventral bristles. Flagellum yellowish brown with a whitish filiform tip that is almost half the length of flagellum (Fig. 4J). Arista dark brown with broadened base. Eyes meeting for about twice length of ocellar triangle (7–8 facets). Frons shining black; face densely silver pollinose; palpus not assessable. Laterally, occiput weakly grey pollinose in lower and weakly brown pollinose in upper half; the latter twice as broad as lower half. **Thorax.** Postpronotal lobe yellowish white, weakly grey pollinose, without distinct longer hairs. Prescutum and scutum black, weakly brown pollinose, with two dorsocentral rows of short hairs. Scutellum black, weakly brown pollinose and with short hairs along posterior margin. Subscutellum black, laterally densely, centrally weakly silver pollinose. Pleura black, bare, weakly silver pollinose. Wing length: 3.8 mm; wing width: 1.2 mm. Length of third costal section (LTC) about 0.3

times length of fourth costal section (LFC). Pterostigma absent. Wing covered with microtrichia except partly bare in small basal cells, e.g., bc, and beginning of cells sc, c, r₁, br and bm. Crossvein r-m reaches cell dm at the middle of the cell's length. Halter narrowly brown at base, otherwise white. Legs with coxae and trochanters dark brown. Hind trochanter without a distinct protuberance or spines. Femura dark brown except yellow at tip; silver pollinose except hind femur shining posteroventrally. Only mid femur with posterodorsal and posteroventral row of black ventral spines in apical half. Hind femur ventrally hollowed in basal third, about two-thirds the height as at its middle (Fig. 5C). Tibiae yellow but with a brown tinge medially, especially dorsally, and extending towards the apex, more extensive and blackish in one specimen. Hind tibia considerably bent (Fig. 5C). Tarsal segments yellow. Hind basitarsus flattened. Pulvilli slightly longer (front leg) or slightly shorter than distitarsus (mid and hind leg). **Abdomen.** Tergites black, shining but tergite 1 grey pollinosity; evenly covered with short black hairs, tergite 1 with hairs paler, especially laterally where they form a distinct, mono-serial fan of longer bristly hairs. Tergite 3 latero-ventrally tapering to a point clearly extended below the adjacent tergites. **Genitalia:** Large, giving the abdomen a very clubbed appearance. Viewed caudally, membranous area placed to the right, narrow and sickle-shaped (Figs 4B, 4D). Viewed ventrocaudally, surstyli rather angular, their distal margin forming a horizontal line (Fig. 4D). Strictly dorsal, surstyli with broad base (broader on right surstylus) and fingerlike apex; left surstylus slightly longer and apically curved inwards (Fig. 4B). In lateral view base of right surstylus considerably broader than on left surstylus; fingerlike apex rather straight (Figs 4A, 4C). Epandrium small, only slightly longer than surstyli. Viewed ventrally, right gonopod larger than left one (Fig. 4B). Phallus with three short ducts, one bearing a small hook at its base (Fig. 4F). **FEMALE.** Body length: 3.0 mm. Differing from male by eyes separated, with distinctly enlarged anterior facets. Frons entirely silver pollinose in lower half, but shining in upper half, broadest in its middle, four times largest ommatidial facet. Filiform tip of flagellum slightly shorter. Wing length: 3.3 mm. Wing width: 1.0 mm. Front femur with two white bristles at base. Hind leg with femur not hollowed basally and tibia less strongly bent. Pulvilli on fore and mid leg distinctly longer than distitarsus; on hind leg shorter than distitarsus. Tergite 1 dark brown, weakly silver pollinose; with lateral hair fan consisting of about twelve hairs reaching on dorsal surface but diminishing in length towards center. Tergite 2–6 dark brown, weakly silver pollinose, laterally with short pale hairs that extend onto dorsal surface along posterior margin. **Genitalia:** Ovipositor in dorsal view (Fig. 4I) with base (tergite 7) dark brown, ovate, longer than broad, weakly silver pollinose. Piercer (tergites 8 & 9) yellowish and shining. Transition be-

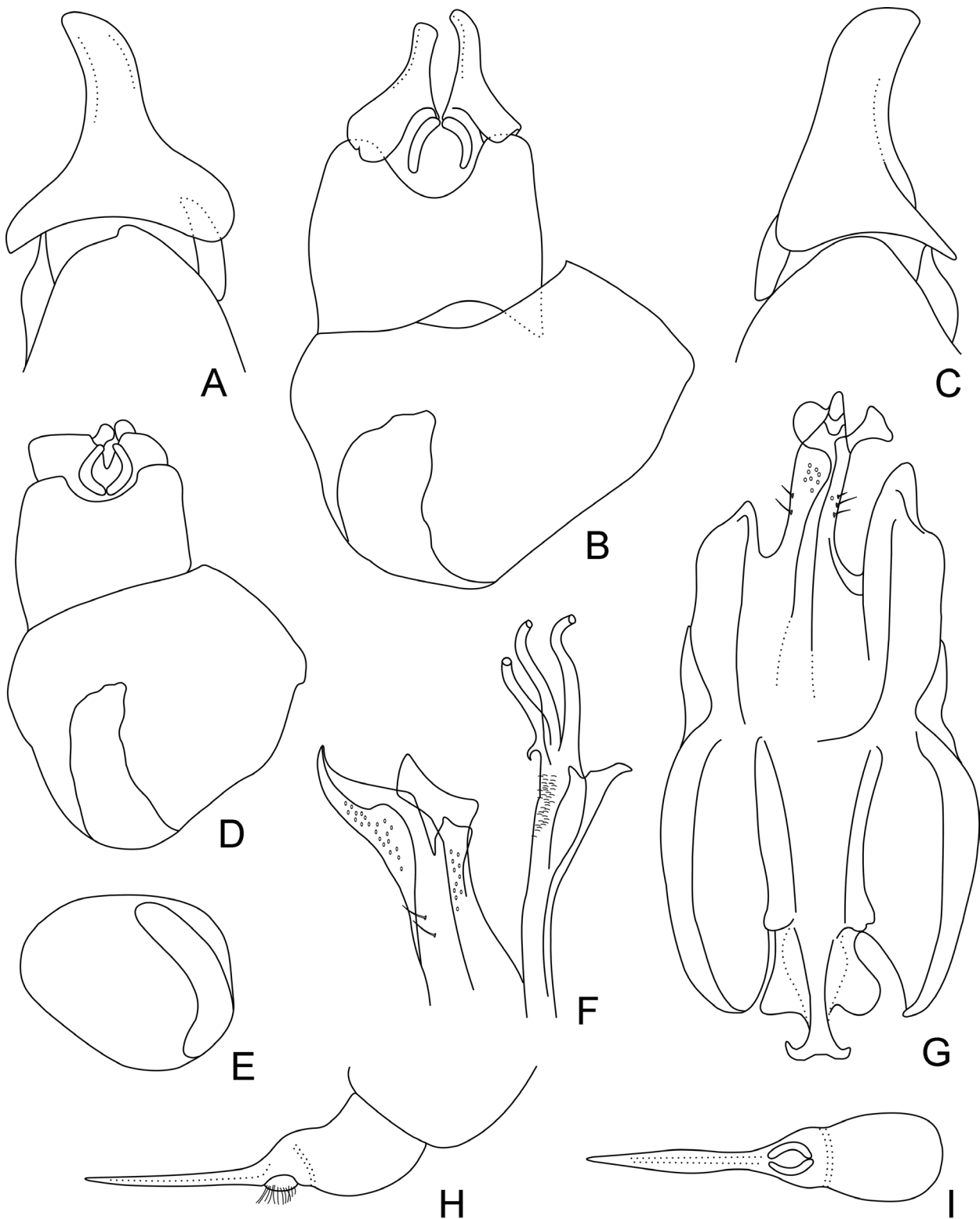


Fig. 4. *Tomosvaryella pugiunculus* Kehlmaier & Gibbs sp. n. **A.** Lateral view of right surstylus. **B.** Strictly dorsal view of surstyli. **C.** Lateral view of left surstylus. **D.** Dorso-caudal view of synergosternite 8. **E.** Caudal view of synergosternite 8. **F.** Left lateral view of phallus and phallic guide. **G.** Ventral view of synergosternite 8 without phallus. **H.** Left lateral view of ovipositor. **I.** Dorsal view of ovipositor.

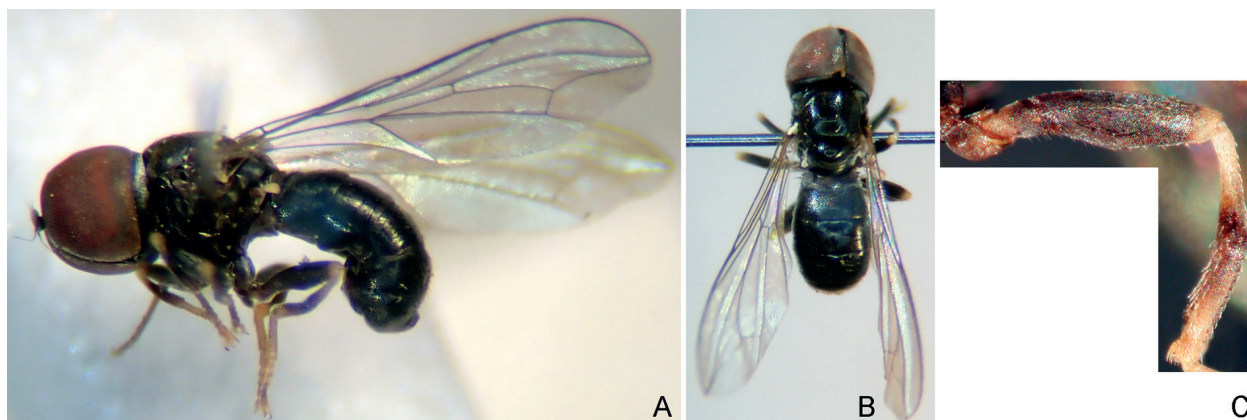


Fig. 5. Male *T. pugiunculus* Kehlmaier & Gibbs sp. n. **A.** Left lateral view; paratype. **B.** Dorsal view; paratype. **C.** Anterior view of left hind leg; holotype.

tween tergite 7 and 8 constricted. Tergite 9 with weak lateral flanges in its middle. Piercer almost three times length of base. In lateral view (Fig. 4H), piercer straight, reaching posterior margin of sternite 3.

Type material. **HOLOTYPE** ♂, **SPAIN:** Mallorca, Cala Figuera, 39°56'56"N 3°10'18"E, 92 m, 21.v.2007, D.J. Gibbs [SMTD]. **PARATYPES:** same data as holotype [1♂, PCDG; 1♂, BMNH; 1♂, OUMNH]; same

data as holotype [1♀, PCDG]; same data as holotype [1♀, SMTD]; Mallorca, Puig de Sant Martí, 39°49'29"N 3°05'51"E, 19.v.2007, D.J. Gibbs [1♂, PCDG]; same data as previous, 23.iv.2006 [1♂, PCDG]; Mallorca, Sa Moleta, 712 m, 39°49'41"N 2°49'03"E, 21.v.2007, D.J. Gibbs [1♂, PCDG; 1♂, BMNH; 1♂, OUMNH]; Mallorca, Sa Coveta Negra, 39°47'24"N 2°53'28"E, 21.v.2007, D.J. Gibbs [1♂, PCDG; 1♂, BMNH].

Table 1. Species list of Pipunculidae of The Albufera International Biodiversity Project (TAIB) (Spain, Mallorca). The list is based on the herein presented records, partly published in Riddiford (2006 – records from 2001), Riddiford & Ferriz (2007 – records from 2006) and previously unpublished records from 2007. Total: 20 species.

Cephalops vittipes (Zetterstedt, 1844)
Clistoabdominalis dilatatus (De Meyer, 1997)
Clistoabdominalis imitator (De Meyer, 1995)
Eudorylas bermeri Kehlmaier, 2005
Eudorylas mediterraneus De Meyer & Ackland, 1997
Eudorylas obliquus Coe, 1966
Eudorylas venturái Kehlmaier, 2005
Eudorylas wahisi De Meyer, 1997
Pipunculus aff. *carlestolrai* Kuznetsov, 1993
Pipunculus lenis Kuznetsov, 1991
Tomosvaryella cilitarsis (Strobl, 1910)
Tomosvaryella frontata (Becker, 1897)
Tomosvaryella geniculata (Meigen, 1824)
Tomosvaryella kuthyi (Aczél, 1944)
Tomosvaryella osito Kehlmaier, Gibbs & Withers sp. n.
Tomosvaryella pugiunculus Kehlmaier & Gibbs sp. n.
Tomosvaryella resurgens De Meyer, 1997
Tomosvaryella sepulta De Meyer, 1997
Tomosvaryella trichotibialis De Meyer, 1995
Verrallia aucta (Fallén, 1817)

Table 2. Species list of Pipunculidae of the Wetland Kerkini Biodiversity Study (Greece) based on the herein presented records. Total: 22 species.

Chalarus brevicaudis Jervis, 1992
Chalarus indistinctus Jervis, 1992
Chalarus spurius (Fallén, 1816)
Verrallia aucta (Fallén, 1817)
Nephrocerus scutellatus (Macquart, 1834)
Cephalops (Semicephalops) straminipes (Becker, 1900)
Clistoabdominalis ruralis (Meigen, 1824)
Dorylomorpha imparata (Collin, 1937)
Dorylomorpha lautereri Albrecht, 1990
Eudorylas fluviatilis (Becker, 1900)
Eudorylas obliquus Coe, 1966
Eudorylas pannonicus (Becker, 1897)
Eudorylas trigonus (Becker, 1921)
Eudorylas unicolor (Zetterstedt, 1844)
Eudorylas zermattensis (Becker, 1897)
Tomosvaryella cilifemorata (Becker, 1907)
Tomosvaryella coquilletti (Kertész, 1907)
Tomosvaryella freidbergi De Meyer, 1995
Tomosvaryella geniculata (Meigen, 1824)
Tomosvaryella inermis De Meyer, 1995
Tomosvaryella israelensis De Meyer, 1995
Tomosvaryella kuthyi Aczél, 1944

Etymology. The species epithet *pugiunculus* is Latin for ‘stiletto’, a little dagger, referring to the dorsal shape of the ovipositor. The specific epithet is to be treated as a noun in apposition.

FAUNISTICS

In this section we report the new material collected from field excursions and new material studied from the collections mentioned above, listed alphabetically following the current subfamily and tribal classification (Kehlmaier et al. 2014, Raffael & De Meyer 1992). In the course of this study, the presence of many species could be established for various countries for the first time (marked with an asterisk (*) after the country’s name). Appendix II summarises these findings, providing species lists for those countries, whose pipunculid fauna has not been summarised in the past years, i.e., Cyprus, Egypt, Greece, Malta, Morocco, Tunisia, and Turkey. Tables 1–2 provide species lists for two biodiversity studies, one conducted at S’Albufera Natural Park (Mallorca, Spain) (Table 1) and the second at Lake Kerkini and its associated Nature Reserves (northern Greece) (Table 2).

CHALARINAE

Chalarus brevicaudis Jervis, 1992

GREECE*: Kendriki Makedonia, Kerkini, Ecotourism site, 41°08'15.6"N 23°13'01.2"E, 45 m, 11–17.vii.2006, G. Ramel, det. D.J. Gibbs [1♀, BMNH]. **SPAIN**: Madrid, Monte de El Pardo, El Goloso, 40°31'14"N 3°44'42"W, 750 m, MT, 9–16.vi.1991, J.L. Nieves & C. Rey [1♂, MNCN].

Chalarus exiguus (Haliday, 1833)

SPAIN: Madrid, Sierra de Guadarrama, Cercedilla, Estación Biológica El Ventorrillo, 40°45'16.5"N 4°01'15.5"W, 1450 m, MT, 1–6.vi.1990, J.L. Nieves & C. Rey [1♀, MNCN].

Chalarus fimbriatus Coe, 1966

FRANCE: Corsica, Forêt d’Agnone, Vizzavona, 910 m, 30–31.v.2000, A.C. Pont, det. D.J. Gibbs [1♀, BMNH].

Chalarus indistinctus Jervis, 1992

FRANCE: Pyrénées-Orientales, forêt de la Massane, Col del Pal, 20.viii.2009, J. Garrigue, det. P. Withers [1♂, PCPW]. **GREECE***: Kendriki Makedonia, Kerkini, Beles, 41°17'19.5"N 23°12'18.4"E, 550 m, 11–17.iv.2005, G. Ramel, det. D.J. Gibbs [1♀, BMNH]. **SPAIN**: Canta-

bria, San Pedro de Bedoya, MT, 17–30.viii.1990, C. Rey [3♀♀, MNCN].

Chalarus juliae Jervis, 1992

SPAIN: Madrid, Sierra de Guadarrama, Cercedilla, Estación Biológica El Ventorrillo, 40°45'16.5"N 4°01'15.5"W, 1450 m, MT, 18–25.viii.1989, J.L. Nieves & C. Rey [1♂, MNCN].

Chalarus latifrons Hardy, 1943

FRANCE: Alpes-Maritimes, Col du Mercantour, 29.viii.2010, P. Withers, det. P. Withers [1♂, PCPW].

Chalarus spurius (Fallén, 1816)

FRANCE: Ardèche, forêt de Païolive, Bildon, 29.vi–21.vii.2011, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Pyrénées Orientales, forêt de la Massane, Ripisylve, 10.vi.2009, J. Garrigue, det. P. Withers [1♂, PCPW]; Corsica, Forêt d’Agnone, Vizzavona, 910 m, 30–31.v.2000, A.C. Pont, det. D.J. Gibbs [1♀, BMNH]; same data as previous, 1–2.vi.2000 [2♀♀, BMNH]. **GREECE***: Kendriki Makedonia, Kerkini, Beles, 41°17'19"N 23°12'18"E, 25.iv–1.v.2005, G. Ramel, det. D.J. Gibbs [1♀, PCDG]; same data as previous, 30.v–5.vi.2005 [2♀♀, PCDG]. **SPAIN**: Madrid, Sierra de Guadarrama, Cercedilla, Estación Biológica El Ventorrillo, 40°45'16.5"N 4°01'15.5"W, 1450 m, MT, 1–7.v.1990, J.L. Nieves & C. Rey [1♀, MNCN]; same data as previous, 7–15.v.1990 [4♀♀, MNCN]; same data as previous, 15–22.v.1990 [4♀♀, MNCN]; same data as previous, 23–31.v.1990 [3♀♀, MNCN]; same data as previous, 9–16.vi.1989 [2♀♀, MNCN]; same data as previous, 30.vi–6.vii.1989 [1♂, MNCN]; same data as previous, 10.vii.1991 [1♀, MNCN]; same data as previous, 21–28.ix.1989 [1♀, MNCN]; Gerona, Caralps, 1200–1300 m, 13–17.vi.1982, S. Andersen, L. Lyneborg, V. Michelsen [1♂, ZMUC].

Chalarus zyginae Jervis, 1992

SPAIN*: Madrid, Monte de El Pardo, El Goloso, 40°31'14"N 3°44'42"W, 750 m, MT, 24–31.vii.1991, J.L. Nieves & C. Rey [1♀, MNCN]; same data as previous, 1–8.viii.1991 [1♂ 3♀♀, MNCN; 1♀, PCCK]; Cantabria, San Pedro de Bedoya, MT, 17–30.viii.1990, C. Rey [1♀, MNCN].

Remarks. Previously *C. zyginae* has only been recorded from the type specimens, reared from *Zygina suavis* Rey, 1891 (Hemiptera: Cicadellidae: Typhlocybinae) collected in Italy. The total body size of the specimens studied here lies between 1.7 and 2.3 mm, fitting well to the species concept presented in Jervis (1992).

Jassidophaga pilosa (Zetterstedt, 1838)

FRANCE*: Pyrénées-Orientales, forêt de la Massane, réserve intégrale, 14.v.2009, J. Garrigue, det. P. Withers [3♀♀, PCPW].

Jassidophaga villosa (von Roser, 1840)

FRANCE: Ardèche, forêt de Païolive, Langarneyre, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [3♀♀, PCPW]; Ardèche, forêt de Païolive, Combe de Bouse, 8–28.iv.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Granzon, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [1♀, PCPW]. **SPAIN**: Gerona, Caralps, 1200–1300 m, 13–17.vi.1982, S. Andersen, L. Lyneborg, V. Michelsen [1♀, ZMUC].

Remarks. First French records with locality data. Previously, only a country record of unknown provenance was published (De Meyer 1992; Withers 2006).

Verrallia aucta (Fallén, 1817)

CYPRUS*: Diarizos Valley, Nikoklela, 70 m, 23.iv.2002, M.J. Ebejer, det. D.J. Gibbs [1♂, PCME]. **FRANCE**: Ardèche, forêt de Païolive, Hermitage, 28.iv–23.v.2010, M. Speight & E. Castella, det. P. Withers [1♀, PCPW]; Ardèche, forêt de Païolive, 23.v–26.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Combe des Bouses, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Montchamp, 24.v–31.vi.2009, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Langarneyre, 26.vi–10.vii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Chibasse, 25.v–27.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]. **GREECE***: Pelopónnisos, Taïyatos mountains, 950–1800 m, 15–19.v.1990, ZMCE [1♀ (DNA CK583, ENA LT999989), ZMUC]; Kendriki Makedonia, Kerkini, Ecotourism site, 41°08'15.6"N 23°13'01.2"E, 45 m, 16–22.v.2006, G. Ramel, det. D.J. Gibbs [1♀, BMNH]; Kendriki Makedonia, Kerkini, Kerkini marsh site, 41°13'32.8"N 23°05'04.2"E, 45 m, 25.iv–1.v.2007, G. Ramel, det. D.J. Gibbs [1♀, BMNH]. **PORTUGAL**: Algarve, Albufeira, 27.ii–4.iii.1988, A.E. Stubbs, det. D.J. Gibbs [1♂, PCDG]. **SPAIN**: Salamanca, Villar de Ciervo, Las Coronas, 17–21.v.2005, H.-P. Tschorsnig [1♂, PCCK]; Gerona, Caralps, 1200–1300 m, 13–16.vi.1982, S. Andersen, L. Lyneborg, V. Michelsen [1♀, ZMUC]; Madrid, Sierra de Guadarrama, Cercedilla, Estación Biológica El Ventorrillo, 40°45'16.5"N 4°01'15.5"W, 1450 m, MT, 1–6.vi.1990, J.L. Nieves & C. Rey [1♀, MNCN]; same data as previous, 16–22.vi.1989 [1♀, MNCN]; same data as previous, 22–30.vi.1989 [2♀♀,

MNCN]; same data as previous, 30.vi–6.vii.1989 [3♀♀, MNCN]; same data as previous, 6–14.vii.1989 [1♀, MNCN]; same data as previous, 12.vii.1991 [1♀, MNCN]; same data as previous, 14–21.vii.1989 [2♀♀, MNCN]; same data as previous, 20–28.vii.1989 [1♀, MNCN]; same data as previous, 28.vii–4.viii.1989 [1♀, MNCN]; Mallorca, Puig de Sant Martí, 39°49'29"N 3°05'51"E, 23.iv.2006, D.J. Gibbs, det. D.J. Gibbs [7♀♀, PCDG]; 16.iv.2001, Mallorca, S'Albufera, Es Comú, M.J. Ebejer, det. M.J. Ebejer [1♂, PCME]. **TUNISIA***: Tabarka area, 7–18.v.1988, ZMCE [2♀♀ (Jeff Skevington specimen # 8542 & 8543; 1♀ DNA CK582, ENA LT999990), ZMUC].

NEPHROCERINAE*Nephrocerus scutellatus* (Macquart, 1834)

FRANCE: Ardèche, forêt de Païolive, Combe de Bouse, 25.v–26.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Bildon, 6–28.iv.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Montchamp, 28.iv–22.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; same data as previous, 6.v–29.vi.2011, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Langarneyre, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; same data as previous, 26.vi–10.vii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Hermitage, 8–28.iv.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; same data as previous, 28.iv–23.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Granzon, 8–28.iv.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; same data as previous, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Granzon, 25.v–27.vi.2010, M. Speight & E. Castella, det. P. Withers [2♀♀, PCPW]; Ardèche, forêt de Païolive, Chibasse, 25.v–27.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, Réserve Naturelle Nationale des Gorges de l'Ardèche, 15.iv.2015, J. Claude, det. P. Withers [1♂, PCPW]; Pyrénées-Orientales, forêt de la Massane, Ripi, 3.vi.2009, J. Garrigue, det. P. Withers [1♂, PCPW]; Var, Vidauban, 7.v.2014, T. Ramage, det. P. Withers [1♀, PCPW]. **GREECE***: Pelopónnisos, 15 km N Leonidhion, 27.iv.1998, V. Michelsen [1♂, ZMUC]; Thessaly, Vólos, Platania, 12.v.2005, L. & K. Standfuss [1♂, PCCK]; same data as previous, 18.v.2005 [1♂, PCCK]; Pelopónnisos, Taïyatos mountains, 950–1800 m, 15–19.v.1990, ZMCE [4♂♂, ZMUC]; Ipiros, Smólikas mountains, 700–1500 m, 21–22.v.1994, V. Michelsen [1♀, ZMUC]; Ipiros, Peristéri mountains, 1200–1700 m, 24–28.v.1994, S. Andersen [1♀, ZMUC]; Kendriki Makedonia, Kerkini, Kerkini marsh site, 41°13'32.8"N 23°05'04.2"E, 45 m, 25.iv–1.v.2007, G. Ramel, det. D.J. Gibbs [1♀,

BMNH]; Kendriki Makedonia, Kerkini, Krousia mts. site, 41°11'32.4"N 23°03'59.5"E, 190 m, 30.v–5.vi.2007, G. Ramel, det. D.J. Gibbs [1♀, BMNH]; Kendriki Makedonia, Kerkini, Ramna site, 41°17'43"N 23°11'33"E 750 m, 16–22.vi.2008, G. Ramel, det. D.J. Gibbs [1♂, PCDG]. **SPAIN**: Lerida, Sorpe, 1200–1300 m, 19–22.vi.1982, S. Andersen, L. Lyneborg, V. Michelsen [7♂♂, coll. ZMUC].

PIPUNCULINAE

PIPUNCULINI

Pipunculus campestris Latreille, 1802

SPAIN: Pontevedra, Sanxenxo, 42°24'53.1"N, 8°52'04.7"W, 6 m, 24.viii.2008, R. Andrade [1♂, PCCK]; Gerona, Caralps, 1200–1300 m, 13–17.vi.1982, S. Andersen, L. Lyneborg, V. Michelsen [4♂♂, ZMUC].

Pipunculus aff. *carlestolrai* Kuznetsov, 1993

FRANCE: Ardèche, forêt de Païolive Bildon, 25.vii.2010, M. Speight & E. Castella [1♂, SMTD]; Ardèche, forêt de Païolive Bildon, Granzon, 25.vii.10, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]. **SPAIN**: Mallorca, Puig de Sant Martí, 39°49'29"N 3°05'51"E, 23.iv.2006, D.J. Gibbs [1♂ 2♀♀, SMTD].

Remarks. A final taxonomic conclusion could not be established yet. The specimens from Mallorca have been published previously as *P. carlestolrai* in Riddiford & Ferriz (2007).

Pipunculus elegans Egger, 1860

FRANCE*: Ardèche, forêt de Païolive, Langarneyre, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW].

Pipunculus lenis Kuznetsov, 1991

FRANCE: Ardèche, forêt de Païolive, Combe des Bouses, 25.v–26.v.2010, M. Speight & E. Castella, det. P. Withers [1♀, PCPW]. **SPAIN**: Mallorca, S'Oliveret d'Abaix, Alaró, 28.v.2007, J. Lilla, det. D.J. Gibbs [1♀, PCDG]; Burgos, near Ona, 19.vi.1980, P.J. Chandler, det. P.J. Chandler [1♂, PCPC].

Pipunculus oldenbergi Collin, 1956

SPAIN*: Asturias, Covadonga, 11.v.1928, J. Dusmet [1♂, MNCN].

Pipunculus tenuirostis Kozánek, 1981

FRANCE: Ardèche, forêt de Païolive, Hermitage, 9–28.iv.2010, M. Speight & E. Castella, det. P. Withers [2♀♀, PCPW].

Pipunculus tumbarinus Kehlmaier, 2010

TUNISIA*: 13 km N Ain Draham, 22–24.iii.1986, ZMCE [1♂, ZMUC]; 5 km E Tamera, 21–25.iii.1986, ZMCE [1♂, ZMUC]; Ain Draham area, 5–18.v.1988, ZMCE [1♂ (DNA CK581, ENA LT999988), ZMUC].

Remarks. Species only known previously from its type locality on Sardinia, Italy.

Pipunculus zugmayeriae Kowarz, 1887

SPAIN*: Logroño, Villanueva de Cameros, 20.vi.1980, P.J. Chandler, det. P.J. Chandler, vid. D.J. Gibbs [1♂, PCPC].

CEPHALOPSINI

Cephalops (Cephalops) aeneus Fällén, 1810

FRANCE: Ardèche, forêt de Païolive, Montchamp, 30.viii–29.ix.2011, M. Speight & E. Castella, det. P. Withers [1♀, PCPW]. **ITALY**: Sicily, Catania, Etna, Piano della Donne, 1450 m, 5.vi.1999, M.J. Ebejer, det. M.J. Ebejer [1♂, PCME].

Cephalops (Cephalops) conjunctivus Coe, 1958

FRANCE: Ardèche, forêt de Païolive, Langarneyre, 30.ix.10, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Granzon, 25.v–27.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]. **SPAIN**: Malaga, Sierra de Tejada, Maro, 19.iv.1997, C.J. Palmer, det. D.J. Gibbs [1♀, C.J. Palmer]; Valencia, Fuente del Abrullador, Chella, 39°02'32"N 0°40'50"W, 25.v.2006, S. Montagud et al. [1♂, MVHN (Cod. 280308MP22)]; Andalucía, W of Capilerilla, 36°56'21"N 3°20'26"W, 1480 m, 7.vi.2008, D.J. Gibbs, det. D.J. Gibbs [1♂, PCDG]; Madrid, Monte de El Pardo, El Goloso, 40°31'14"N 3°44'42"W, 750 m, 1–8.vi.1991, J.L. Nieves & C. Rey [1♀, MNCN]; same data as previous, 9–16.vi.1991 [1♂, MNCN]; Madrid, El Boalo, 40°43'19"N 3°55'03"W, 940 m, 22–28.vi.1998, F. Fontal [1♂ 1♀, MNCN]; Jaén, Sierra de Cazorla, Roblehondo, 1300 m, 23–29.vi.1993, J.L. Nieves [1♀, MNCN]; Madrid, Monte de El Pardo, El Goloso, 40°31'14"N 3°44'42"W, 750 m, 17–23.ix.1991, J.L. Nieves & C. Rey [2♂♂, MNCN]; same data as previous, 1–8.x.1991 [2♀♀, PCCK]; same data as previous, 9–17.x.1991 [1♂, PCCK]. **TURKEY**: Antalya, 40 km

N of Akseki, 1700 m, 28.ix.2006, N. Vikhrev, det. D.J. Gibbs [1♂, PCNV].

Cephalops (Cephalops) vittipes (Zetterstedt, 1844)

FRANCE: Ardèche, forêt de Païolive, Bildon, 25.viii.2010, M. Speight & E. Castella, det. P. Withers [1♀, PCPW]. **SPAIN*:** Mallorca, S'Albufera, Es Comú, 39°46'34"N 3°08'27"E, 2 m, 18.v.2007, D.J. Gibbs, det. D.J. Gibbs [1♂, PCDG]; Mallorca, Puig de Sant Martí, 39°49'29"N 3°05'51"E, 19.v.2007, D.J. Gibbs, det. D.J. Gibbs [1♀, PCDG].

Cephalops (Parabeckerias) obtusinervis (Zetterstedt, 1844)

GREECE*: Pelopónnisos, Taïyetos mountains, 950–1800 m, 15–19.v.1990, ZMCE [1♀, ZMUC].

Cephalops (Semicephalops) grandimembranus De Meyer, 1989

FRANCE*: Ardèche, forêt de Païolive, Chibasse, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Bildon, 28.vii–31.viii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW].

Remarks. This species was formerly only known from its type locality in southern Germany (Bavaria, Hohenaschau im Chiemgau).

Cephalops (Semicephalops) penultimus Ackland, 1993

SPAIN*: Madrid, Sierra de Guadarrama, Cercedilla, Estación Biológica El Ventorrillo, 40°45'16.5"N 4°01'15.5"W, 1450 m, 6–14.vii.1989, J.L. Nieves & C. Rey [1♂, MNCN]; same data as previous, 20–28.vii.1989 [1♀, MNCN]; same data as previous, 28.vii–4.viii.1989 [1♂ 1♀, PCCK; 1♀, MNCN]; same data as previous, 11–18.viii.1989 [1♂, MNCN]; same data as previous, 25.–31.viii.1989 [1♀, MNCN].

Remarks. The specimens cited in Kehlmaier (2001) under the name *Cephalops subultimus* Collin, 1956 were misidentified and actually belong to *C. penultimus*. *Cephalops subultimus* must be deleted from the Spanish checklist as no other Spanish record of this species is known or published. *Cephalops penultimus* has only recently been described and detailed figures and a key for identification are provided by Ackland (1993). So far, *C. penultimus* is known from Belgium, France, Germany, Great Britain, Portugal, and Spain.

Cephalops (Semicephalops) perspicuus (de Meijere, 1907)

GREECE*: Pelopónnisos, 5 km S Monemvasia, 17.vi.1984, G. Christensen [1♂, ZMUC].

Cephalops (Semicephalops) straminipes (Becker, 1900)

GREECE*: Kendriki Makedonía, Kerkini, Kerkini lake site, 41°09'06.5"N 23°11'55.0"E, 75 m, 9–15.v.2005, G. Ramel, det. D.J. Gibbs [1♀, BMNH].

Cephalops (Semicephalops) subultimus Collin, 1956

FRANCE: Ardèche, forêt de Païolive, Granzon, 25.v–27.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Chibasse, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW].

Cephalops (Semicephalops) ultimus (Becker, 1900)

FRANCE: Ardèche, forêt de Païolive, Granzon, 30.ix.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]. **SPAIN:** Madrid, Sierra de Guadarrama, Cercedilla, Estación Biológica El Ventorrillo, 40°45'16.5"N 4°01'15.5"W, 1450 m, 6–14.vii.1989, J.L. Nieves & C. Rey [2♂♂, MNCN]; same data as previous, 14–21.vii.1989 [1♀, MNCN]; Asturias, Tanda, 2–9.viii.1993, C. Rey [1♀, MNCN]; Madrid, Sierra de Guadarrama, Cercedilla, Estación Biológica El Ventorrillo, 40°45'16.5"N 4°01'15.5"W, 1450 m, 21–28.ix.1989, J.L. Nieves & C. Rey [1♀, MNCN]. **TURKEY*:** Isparta, Kovada, 7.vii.1997, M.J. Ebejer, det. D.J. Gibbs [1♂, PCME]; Mugla, Marmaris, 14.vii.1997, M.J. Ebejer, det. D.J. Gibbs [3♂♂, M.J. Ebejer].

Remarks. The recently described *Cephalops lusitanicus* Kehlmaier & Andrade, 2016 from Portugal stands very close to *C. ultimus*. A separation of these species based on external morphology and genitalic characters is provided in Kehlmaier & Andrade (2016). Female specimens of *C. ultimus* from the Mediterranean tend to have yellowish abdominal markings as seen in *C. perspicuus*. Hence, a closer look at the female ovipositor is necessary to distinguish the *C. ultimus* from *C. perspicuus* (see Kehlmaier & Andrade 2016).

Cephalops (Semicephalops) varipes (Meigen, 1824)

SPAIN: Madrid, Sierra de Guadarrama, Cercedilla, Estación Biológica El Ventorrillo, 40°45'16.5"N 4°01'15.5"W, 1450 m, 28.vii–4.viii.1989, J.L. Nieves & C. Rey [1♀, MNCN]; same data as previous, 11.–18.viii.1989 [1♀, MNCN].

Remarks. The holotype of *Pipunculus varipes* Meigen, 1824 was recently studied and found to be the senior syn-

onym of *Pipunculus semifumosus* Kowarz, 1887 (Kehlmaier 2008b).

Cephalosphaera (Cephalosphaera) furcata (Egger, 1860)

FRANCE: Corsica, Forêt d'Agnone, Vizzavona, 910 m, 28–29.v.2000, A.C. Pont, det. D.J. Gibbs [1♂, BMNH].

Cephalosphaera (Cephalosphaera) germanica Aczél, 1940

FRANCE: Ardèche, forêt de Païolive, Chibasse, 8–28.iv.2010, M. Speight & E. Castella, det. P. Withers [1♀, PCPW]; Pyrénées-Orientales, forêt de la Massane, réserve intégrale, 14.v.2009, J. Garrigue, det. P. Withers [1♀, PCPW]. **SPAIN:** Jaén, Sierra de Cazorla, Roblehondo, 1300 m, 28.v–15.vi.1993, J.L. Nieves [1♀, MNCN]; Soria, San Leonardo de Yagüe, 15.vi.1991, C. Rey [1♀, MNCN]; Madrid, Sierra de Guadarrama, Cercedilla, Estación Biológica El Ventorrillo, 40°45'16.5"N 4°01'15.5"W, 1450 m, 9–16.vi.1989, J.L. Nieves & C. Rey [1♂, MNCN]; Jaén, Sierra de Cazorla, Roblehondo, 1300 m, 23–29.vi.1993, J.L. Nieves [1♀, MNCN]; Madrid, Sierra de Guadarrama, Cercedilla, Estación Biológica El Ventorrillo, 40°45'16.5"N 4°01'15.5"W, 1450 m, 6–14.vii.1989, J.L. Nieves & C. Rey [1♂, MNCN].

EUDORYLINI

Claraeola conjuncta (Collin, 1949)

TUNISIA*: 15 km NW Kebili, 17.iii.1986, ZMCE [1♂, ZMUC].

Remarks. The species was redescribed by Kehlmaier (2005b).

Clistoabdominalis dilatatus (De Meyer, 1997)

FRANCE: Ardèche, forêt de Païolive, Combe de Bouse, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Pyrénées-Orientales, forêt de la Massane, Col del Pal, 8.vii.2009, J. Garrigue, det. P. Withers [1♂, PCPW]; same data as previous, 20.viii.2009, J. Garrigue, det. P. Withers [1♂, PCPW]. **SPAIN:** Valencia, Losa del Obispo, 39°42'02"N 0°52'09"W, 3.iv.2008, S. Teruel [1♂, MVHN (Cod. 270308SM38)]; Asturias, Corros (de Parcal), 10.v.1990, C. Rey [1♂, MNCN]; Salamanca, Villar de Ciervo, Las Coronas, 17–21.v.2005, H.-P. Tschorsnig [1♂, PCCK]; Mallorca, S'Albufera, Es Comú, 39°46'34"N 3°08'27"E, 2 m, 20.iv.2006, D.J. Gibbs, det. D.J. Gibbs [4♂♂ 2♀♀, PCDG]; Mallorca, Puig de Sant Martí, 39°49'29"N 3°05'51"E, 23.iv.2006, D.J. Gibbs, det. D.J. Gibbs [1♂, PCDG]; Mallorca, S'Albufera, Es Comú, dunes, 39°46'34"N 3°08'27"E, 2 m, 25.iv.2006, D.J. Gibbs, det. D.J. Gibbs [1♀, PCDG].

Clistoabdominalis imitator (De Meyer, 1995)

SPAIN: Mallorca, Puig de Sant Martí, 39°49'29"N 3°05'51"E, 19.v.2007, D.J. Gibbs, det. D.J. Gibbs [1♂ 1♀, PCDG].

Clistoabdominalis ruralis (Meigen, 1824)

FRANCE: Alpes-Maritimes, Biot, 20–26.ix.2010, A. Piton, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Montchamp, 28.vii–31.viii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]. **GREECE:** Chios, Thimiana, 38°17'87"N 26°07'89"E, 6–16.v.2003, C.J. Palmer, det. D.J. Gibbs [2♂♂, C.J. Palmer]; Kendriki Makedonia, Kerkini, Pumping station site, 41°12'48.7"N 23°06'11.9"E, 40 m, 13–19.vi.2007, G. Ramel, det. D.J. Gibbs [2♂♂, BMNH]; Kendriki Makedonia, Kerkini, Kerkini lake site, 41°09'06.5"N 23°11'55.0"E, 75 m, 9–15.v.2005, G. Ramel, det. D.J. Gibbs [1♂, BMNH]; Kendriki Makedonia, Kerkini, Krousia Mts. site, 41°11'32.4"N 23°03'59.5"E, 190 m, 4–10.vii.2007, G. Ramel, D.J. Gibbs [1♂, BMNH]; Kendriki Makedonia, Kerkini, Krousia Mts. site, 41°11'32.4"N 23°03'59.5"E, 190 m, 30.v–5.vi.2007, G. Ramel, det. D.J. Gibbs [1♂, BMNH]; Pelopónnisos, Monemvasia, 8.xi.1984, G. Christensen [1♂, ZMUC]. **MALTA:** Buskelt, 9.vii.1993, M.J. Ebejer, det. D.J. Gibbs [1♂, PCDG]. **TURKEY:** Antalya, Side, dunes, 30.ix.2007, N. Vikhrev, det. D.J. Gibbs [1♂, PCDG].

Clistoabdominalis trochanteratus (Becker, 1900)

EGYPT: Safaga, 27.i.2007, N. Vikhrev, det. D.J. Gibbs [3♂♂, PCDG]. **TUNISIA*:** Nefta area, 1–4.v.1988, ZMCE [1♂, ZMUC].

Remarks. *Clistoabdominalis trochanteratus* is widely distributed and most likely represents a species complex (Skevington et al. 2007). The type locality is “Assiut, Luxor” in Egypt. From the Palaearctic, it has also been cited from Portugal (Kehlmaier & Andrade 2016), the Asian part of Turkey (Kehlmaier 2005a), and Iran (Majnon Jahromi et al. 2017a).

Clistoabdominalis tumidus (De Meyer, 1997)

FRANCE: Ardèche, forêt de Païolive, Chibasse, 25.v–27.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Montchamp, 29.vi–21.vii.2011, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Granzon, 6.v–29.vi.2011, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; same data as previous, 29.vi–21.vii.2011, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]. **GREECE:** Pelopónnisos, Taïyets mountains, 950–1800 m, 15–19.v.1990, ZMCE [1♂, ZMUC].

Dasydorylas gradus Kehlmaier, 2005

TURKEY*: 30.v.2008, Antalia, Gundogmus, N. Vikhrev, det. D.J. Gibbs [1♂, PCDG].

Remarks. A distinctive species, formerly known only from Israel (Kehlmaier 2005b).

Dasydorylas holosericeus (Becker, 1987)

FRANCE: Ardèche, forêt de Païolive, Combe de Bouse, 8–28.iv.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; same data as previous, 8.ix–4.x.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Langarneyre, 26.vi–10.vii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; same data as previous, 28.vii–3.viii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Granzon, 29.vi–21.vii.2011, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]. **GREECE***: Kendriki Makedonía, Kerkini, Procom site, 41°22'38.1"N 23°21'58.8"E, 60 m, 27.vi–3.vii.2007, G. Ramel, det. D.J. Gibbs [1♂, PCDG]. **SPAIN***: Gerona, Caralps, 1200–1300 m, 13–17.vi.1982, S. Andersen, L. Lyneborg, V. Michelsen [1♂, ZMUC].

Remarks. First reliable citing from Spain. A previous Spanish record, as *E. demeyeri* Kozánek, 1993 (see Kehlmaier 2005a for synonymy), needs confirmation due to a possible confusion with *Dasydorylas roseri* (Becker, 1897). The type material of *E. demeyeri* proved to be a mixture of *D. holosericeus* and *D. roseri*, but the identity of the single Spanish paratype could not be revalidated so far.

Dasydorylas horridus (Becker, 1897)

FRANCE: Ardèche, forêt de Païolive, Granzon, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Chibasse, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW].

Dasydorylas setosus (Becker, 1908)

SPAIN: Canary Islands, Tenerife, Monte Aguirre, v.1927, A. Cabrera [1♂, MNCN]; Canary Islands, Tenerife, Médano, 18.iv.1930, A. Cabrera [1♂, MNCN]; Canary Islands, Tenerife, Monte Aguirre, xii.1934, A. Cabrera [1♀, MNCN].

Eudorylas angustimembranus (Kozánek, 1991)

FRANCE*: Ardèche, forêt de Païolive, Bildon, 28.vii–31.viii.2010, M. Speight & E. Castella, det. P. Withers

[1♂, PCPW]; same data as previous, 30.ix.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW].

Eudorylas bermeri Kehlmaier, 2005

SPAIN: Granada, Barranco de Miranda, 8 km SW Orgiva, 300 m, 20.iv.1966, L. Lyneborg & M. Lange-mark [1♂, ZMUC]; Mallorca, S'Albufera, Es Comú, 39°46'34"N 3°08'27"E, 2 m, 25.iv.2006, det. D.J. Gibbs [1♂, PCDG]; Almería, Adra, 36°47'10"N, 3°5'44.5"W, 433 m, 9.v.2012, R. Andrade [1♂ 1♀, PCCK]; Ibiza, Torre de Ses Portes, P.N. Ses Salines, 30.v.2006, M.J. Ebejer, det. D.J. Gibbs [1♀, PCDG].

Remarks. First citing for mainland Spain; previously recorded from Mallorca (Balearic Islands) by Riddiford & Ferriz (2007).

Eudorylas blascoi De Meyer, 1997

FRANCE: Pyrénées-Orientales, forêt de la Massane, Col del Pal, 29.vii.2009, J. Garrigue, det. P. Withers [1♂, PCPW]; Var, Vidauban, 7.v.2014, T. Ramage, det. P. Withers [1♂, PCPW]. **GREECE***: Chios, Thimiana, 38°17'87"N 26°07'89"E, 6–16.v.2003, C.J. Palmer, det. D.J. Gibbs [1♀, PCCP]; Kendriki, Makedonía, Thessaloniki, Limni Volvi, 10.v.1998, M.J. Ebejer, det. D.J. Gibbs [1♂, PCME]; Kendriki Makedonía, Kerkini, Midway site, 41°18'49.8"N 23°16'35.6"E, 750 m, 30.vi–6.vii.2008, G. Ramel, det. D.J. Gibbs [1♂, PCDG]; Kendriki Makedonía, Kerkini, Farfara site, 41°19'30"N 23°15'00"E, 750 m, 28.vii–3.viii.2008, G. Ramel, det. D.J. Gibbs [1♀, PCDG]; Kendriki Makedonía, Kerkini, Procom, Promohonas, 41°22'38.1"N 23°21'58.8"E, 60 m, 11–17.vii.2007, G. Ramel, det. D.J. Gibbs [1♀, PCDG]. **SPAIN**: Asturias, Corros (de Parcal), 10.v.1990, C. Rey [1♂, MNCN]; Madrid, El Pardo, 7.viii.1904, J. Arias Encobert [2♂♂, MNCN]. **TURKEY***: Nevsehir, Avanos, Ürgüp area, 1000 m, 4–6.v.1993, V. Michelsen [1♂, ZMUC].

Eudorylas fluviatilis (Becker, 1900)

GREECE*: Kendriki Makedonía, Kerkini, Ecotourism site, 41°08'15.6"N 23°13'01"E, 65 m, 29.viii–4.ix.2006, G. Ramel, det. D.J. Gibbs [1♂, PCDG]. **SPAIN**: Tenerife, Guimar, 3.iv.1973, P.J. Chandler & C.H. Jackson, det. D.J. Gibbs [1♀, PCDG]; Canary Islands, Tenerife, Fanabe, 22.vii.1970, J.J. & A. Menier [2♂♂ 2♀♀, MNHN]; **TURKEY***: Antalya, Side, 28.ix.2007, dunes, N. Vikhrev, det. D.J. Gibbs [1♀, PCDG].

Eudorylas fuscipes (Zetterstedt, 1844)

FRANCE: Ardèche, forêt de Païolive, Granzon, 25.v–27.vi.2010, M. Speight & E. Castella, det. P. Withers

[1♂, PCPW]; Ardèche, forêt de Païolive, Montchamp, 28.iv–22.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Langarneyre, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Hermitage, 23.v–26.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; same data as previous, 26.vi–28.vii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Chibasse, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]. **SPAIN**: Cantabria, San Pedro de Bedoya, 17–30.viii.1990, C. Rey [2♂♂ 2♀♀, MNCN].

Eudorylas fuscus (Zetterstedt, 1844)

FRANCE: Alpes-Maritimes, Sophia Antipolis, 1.ix.2010, leg., det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Bildon, 25.vii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Var, Vidauban, 20.iv.2015, T. Ramage, det. P. Withers [1♂, PCPW]; same data as previous, 28.v.2015, T. Ramage, det. P. Withers [2♂♂, PCPW]; same data as previous, 8.vi.2015, T. Ramage, det. P. Withers [2♂♂, PCPW]. **SPAIN**: Lleida, La Noguera, 41°57'34.3"N, 0°51'44.2"E, 612 m, 3.viii.2014, R. Andrade [1♀, PCCK].

Eudorylas ibericus Kehlmaier, 2005

FRANCE*: Ardèche, forêt de Païolive, Combe de Bouse, 31.viii–8.ix.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Langarneyre, 24.vi–10.vii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, Réserve Naturelle Nationale des Gorges de l'Ardèche, 24.vii.2015, J. Claude, det. P. Withers [1♂, PCPW]. **MOROCCO**: Itzèr area, 2100 m, 16.iv.1989, ZMCE [1♂, ZMUC]. **SPAIN**: Salamanca, Villar de Ciervo, Las Coronas, 17–21.v.2005, H.-P. Tschorsnig [1♀, PCCK]. **TUNISIA***: Ain Draham area, 5–18.v.1988, ZMCE [2♂♂, ZMUC].

Remarks. Ebejer & Kettani (2019) recently recorded females of this species from Morocco.

Eudorylas jenkinsoni Coe, 1966

FRANCE: Ardèche, forêt de Païolive, Chibasse, 25.v–24.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Bildon, 20.vii–30.viii.2010, M. Speight & E. Castella, det. P. Withers [1♀, PCPW]; Ardèche, forêt de Païolive, Granzon, 25.v–27.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; same data as previous, 30.ix.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW].

Eudorylas johnenae Dempewolf, 1996

SPAIN*: Lleida, Sorpe, 1200–1300 m, 19–22.vi.1982, S. Andersen, L. Lyneborg, V. Michelsen [1♂, ZMUC].

Eudorylas longifrons Coe, 1966

FRANCE: Ardèche, forêt de Païolive, Granzon, 25.vii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW].

Eudorylas mediterraneus De Meyer & Ackland, 1997

FRANCE: Bouches-du-Rhône, Martigue La Revaille, 8.v.2017, P. Withers, det. P. Withers [1♂, PCPW]. **GREECE**: Sterea Elada, Drossohori, Parnassos Mts., 15.v.1998, M.J. Ebejer, det. D.J. Gibbs [1♂, PCME]. **PORTUGAL**: Algarve, Albufeira, 26.iv.1989, A.E. Stubbs, det. D.J. Gibbs [1♂, PCDG]. **SPAIN**: Salamanca, Villar de Ciervo, Las Coronas, 17–21.v.2005, H.-P. Tschorsnig [1♀, PCCK]; Ibiza, Es Cavallet, P.N. Ses Salines, 1.vi.2006, M.J. Ebejer, det. D.J. Gibbs [1♀, PCME]; Mallorca, Sa Roca, S'Albufera, 8.x.2007, N.J. Riddiford, det. D.J. Gibbs [1♂, PCDG]; same data as previous, 27–28.x.2007 [2♂♂, PCDG]; same data as previous, 6.x.2007 [1♀, PCDG]; same data as previous, 21–23.x.2007 [1♀, PCDG]; Mallorca, Mondragó, S'Amradador, 9.x.2007, J. Salva, det. D.J. Gibbs [1♀, PCDG]; Mallorca, Puig Sant Martí, 22.x.2007, M.A. Rens, det. D.J. Gibbs [1♀, PCDG].

Eudorylas monegrensis De Meyer, 1997

SPAIN: Andalucía, Corona, 36°55'24"N 3°18'27"W, 1250 m, 12.vi.2008, & det. D.J. Gibbs [1♂, PCDG].

Eudorylas nemoralis Kozánek, 1993

SPAIN: Salamanca, Villar de Ciervo, Las Coronas, 17–21.v.2005, H.-P. Tschorsnig [2♂♂, PCCK].

Eudorylas obliquus Coe, 1966

CYPRUS: Diarizos Valley, Nikoklela, 70 m, 23.iv.2002, M.J. Ebejer, det. D.J. Gibbs [3♂♂, PCME]; Pano Lefkara, 595 m, 26.iv.2002, M.J. Ebejer, det. D.J. Gibbs [1♂, PCME]; Malia, 570 m, 27.iv.2002, M.J. Ebejer, det. D.J. Gibbs [1♂, PCME]. **FRANCE**: Alpes Maritimes, Biot, 20.xi–12.xii.2010, A. Piton, det. P. Withers [1♂, PCPW]; Var, Vidauban, 28.v.2015, T. Ramage, det. P. Withers [1♂, PCPW]. **GREECE**: Pelopónnisos, Taïyetos mountains, 950–1800 m, 15–19.v.1990, ZMCE [2♂♂ 1♀, ZMUC]; Pelopónnisos, Monemvasia, 3.v.1984, G. Christensen [1♂, ZMUC]; same data as previous, 23.v.1984 [1♂, ZMUC]; same data as previous, 7.vi.1984 [1♂, ZMUC]; Kendriki Makedonía, Kerkini, Ecotourism site,

41°08'15.6"N 23°13'01.2"E, 45 m, 23–29.v.2006, G. Ramel, det. D.J. Gibbs [1♀, BMNH]; Kendriki Makedonia, Kerkini, Procom site, Promohonas, 41°22'38.1"N 23°21'58.8"E, 60 m, 4–10.vii.2007, G. Ramel, det. D.J. Gibbs [1♀, BMNH]; Kendriki Makedonia, Kerkini, Pumping St. site, 41°12'48.7"N 23°06'11.9"E, 40 m, 9–15.v.2007, G. Ramel, det. D.J. Gibbs [1♂, BMNH]. **ITALY**: Sicily, Catania, Randazzo, Lago di Gurida, 870 m, 11.vi.1999, M.J. Ebejer, det. D.J. Gibbs [1♂, PCME]. **SPAIN**: Gerona, Caralps, 1200–1300 m, 13–17.vi.1982, S. Andersen, L. Lyneborg, V. Michelsen [1♂, ZMUC]; Valencia, near Alcoy, 1000 m, 21.vi.2003, A.E. Stubbs, det. D.J. Gibbs [2♂♂, PCDG]; Mallorca, S'Albufera, Es Comú, 39°46'34"N 3°08'27"E, 2 m, 20.iv.2006, det. D.J. Gibbs [2♂♂, PCDG]; Mallorca, Puig de Sant Martí, 39°49'29"N 3°05'51"E, 23.iv.2006, det. D.J. Gibbs [2♂♂ 2♀♀, PCDG]; Mallorca, S'Albufera, Es Comú, 39°46'34"N 3°08'27"E, 2 m, 25.iv.2006, det. D.J. Gibbs [1♂ 1♀, PCDG]; Mallorca, Son Ton Woods, Sa Pobla, 21.iv.2001, M.J. Ebejer, det. D.J. Gibbs [2♂♂, PCME].

Eudorylas obscurus Coe, 1966

FRANCE: Ardèche, forêt de Païolive, Montchamp, 8–28.iv.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Granzon, 8–28.iv.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Hermitage, 28.iv–23.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Langarneyre, 26.vi–10.vii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, Réserve Naturelle Nationale des Gorges de l'Ardèche, 18.iii–1.iv.2015, J. Claude, det. P. Withers [1♂, PCJC]; same data as previous, 8–23.vi.2015, det. P. Withers [1♂, PCJC]; Pyrénées-Orientales, forêt de la Massane, réserve intégrale, 3.vi.2009, J. Garrigue, det. P. Withers [3♂♂, PCPW]. **GREECE**: Pelopónnisos, Taïyotos mountains, 950–1800 m, 15–19.v.1990, ZMCE [1♂, ZMUC]. **SPAIN**: Salamanca, Villar de Ciervo, Las Coronas, 17–21.V.2005, H.-P. Tschorsnig [2♂♂, PCCK]; Gerona, Caralps, 1200–1300 m, 13–17.vi.1982, S. Andersen, L. Lyneborg, V. Michelsen [3♂♂, ZMUC]; Lleida, Sorpe, 1200–1300 m, 19–22.vi.1982, S. Andersen, L. Lyneborg, V. Michelsen [1♂, ZMUC]. **TURKEY***: Nevşehir, Avanos, Ürgüp area, 1000 m, 4–6.v.1993, V. Michelsen [1♂, ZMUC].

Eudorylas pannonicus (Becker, 1897)

FRANCE: Ardèche, forêt de Païolive, Combe de Bouse, 25.v–26.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Langarneyre, 28.vii–31.viii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Chibasse, 25.v–27.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive,

Granzon, 29.vi–21.vii.2011, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Hermitage, 28.vii–31.viii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Bildon, 25.vii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]. **GREECE**: Pelopónnisos, 5 km S of Monemvasia, 15.v.1984, G. Christensen [1♀, ZMUC]; Lakonia, 5 km S of Monemvasia, 15.v.1985, G. Christensen [1♀, ZMUC]; Kendriki Makedonia, Kerkini, Midway site, 41°18'49.8"N 23°16'35.6"E, 750 m, 16–22.vii.2008, G. Ramel, det. D.J. Gibbs [1♂ Form A 1♀, PCDG]; Kendriki Makedonia, Kerkini, Krouisia mts. site, 41°11'32.4"N 23°03'59.6"E, 190 m, 13–19.vi.2007, G. Ramel, det. D.J. Gibbs [1♂ Form D, PCDG].

Remarks. *Eudorylas pannonicus* in its current species concept might represent a species complex (Kehlmaier 2005a). At Kerkini, Form A, representing the lectotype of *E. pannonicus*, was collected at “Midway”, whereas Form D, formerly only known from Bulgaria, was collected at “Krouisia”.

Eudorylas subfascipes Collin, 1956

GREECE*: Makedhonia/Thessalia, Olympos, 700–2100 m, 21–26.v.1990, ZMCE [1♂, ZMUC].

Eudorylas subterminalis Collin, 1956

SPAIN: Sobirà, Pallars, Soriguera, 42°22'15.0"N 1°14'12.1"E, 4.viii.2014, R. Andrade [1♀, PCCK].

Eudorylas terminalis (Thomson, 1870)

FRANCE: Ardèche, forêt de Païolive, Langarneyre, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]. **SPAIN**: Gerona, Caralps, 1200–1300 m, 13–17.vi.1982, S. Andersen, L. Lyneborg, V. Michelsen [1♂, ZMUC].

Remarks. First French record with locality data. Previously, only a country record of unknown provenance was published (De Meyer 1992; Withers 2006).

Eudorylas triangularis Kehlmaier, 2005

TURKEY*: Antalya, Köprülü Kanyon National Park, 28–29.iv.1993, V. Michelsen [1♀, ZMUC].

Eudorylas trigonus (Becker, 1921)

GREECE: Kendriki Makedonia, Kerkini, Midway site, 41°18'49.8"N 23°16'35.6"E, 750 m, 12–18.v.2008, G. Ramel, det. D.J. Gibbs [2♀♀, PCDG]; same data as previous, 26.v–1.vi.2008 [2♀♀, PCDG].

Eudorylas unicolor (Zetterstedt, 1844)

GREECE: Ipiros, Smólikas Mountains, 700–1500 m, 21–22.v.1994, V. Michelsen [1♂, ZMUC]; Kendriki Makedonia, Kerkini, Krousia mts. site, 41°11'32.4"N 23°03'59.6"E, 190 m, 27.vi–7.vii.2007, G. Ramel, det. & coll. D.J. Gibbs [1♂, PCDG].

Eudorylas venturai Kehlmaier, 2005

SPAIN: Almería, Alhama, 5 km W, 200–500 m, 17.iii.1966, L. Lyneborg [1♂, ZMUC]; Valencia, Campos de Cerezos, 8.iii.2008, S. Montagud *et al.* [1♂, MVHN (Cod. 140308JL12)]; Granada, Barranco de Miranda, 8 km SW Orgiva, 300 m, 16.iv.1966, L. Lyneborg & M. Langemark [1♂, ZMUC]; Andalucía, Cortijo del Alcazar, 36°55'15"N 4°05'18"E, 990–1200 m, 9.vi.2006, D.J. Gibbs, det. D.J. Gibbs [1♂, PCDG]; Mallorca, Puig de Sant Martí, 39°49'29"N 3°05'51"E, 19.v.2007, D.J. Gibbs, det. D.J. Gibbs [1♂, PCDG].

Remarks. Coe (1969) published the two males from Almería and Granada as *Eudorylas montium* (Becker, 1897). To our knowledge (Kehlmaier 2003, 2005a), no reliable records of *E. montium* from Spain exist and the species should be deleted from the national checklist.

Eudorylas wahisi De Meyer, 1997

SPAIN: Mallorca, S'Albufera, Es Comú, 39°46'34"N 3°08'27"E, 2 m, 25.iv.2006, D.J. Gibbs, det. D.J. Gibbs [1♀, PCDG].

Eudorylas zermattensis (Becker, 1897)

FRANCE: Ardèche, forêt de Païolive, Montchamp, 25.vi–12.vii.2009, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Pyrénées-Orientales, forêt de la Massane, Col del Pal, 20.viii.2009, J. Garrigue, det. P. Withers [1♂, PCPW]. **GREECE*:** 5 km south of Monemvassia, 29.iv.1982, S. Andersen, L. Lyneborg & V. Michelsen [1♀, ZMUC]; Monemvassia, 29.iv.1984, G. Christensen [1♀, ZMUC]; same data as previous, 9.ix.1984 [1♀, ZMUC]; same data as previous, 13.ix.1984 [1♂, ZMUC]; Kendriki Makedonia, Kerkini, 41°09'06.5"N 23°11'55.0"E, 23–29.v.2005, G. Ramel, det. D.J. Gibbs [1♀, PCDG]; Kendriki Makedonia, Kerkini, Ecotourism site, 41°08'15.6"N 23°13'01.2"E, 65 m, 20–26.vi.2006, G. Ramel, det. D.J. Gibbs [1♂ 1♀, BMNH]; Kendriki Makedonia, Kerkini, Pumping St. site, Kerkini, 41°12'48.7"N 23°06'11.9"E, 40 m, 13–19.vi.2007, G. Ramel, det. D.J. Gibbs [1♂, BMNH]; Kendriki Makedonia, Kerkini, Pumping St. site, 41°12'48.7"N 23°06'11.9"E, 40 m, 20–26.vi.2007, G. Ramel, det. D.J. Gibbs [1♀, BMNH]. **SPAIN:** Granada, Rio Guadalfeo, Orgiva, 300 m, 2.iv.1966, L. Lyneborg & M. Langemark

[1♂, ZMUC]; Gerona, Caralps, 1200–1300 m, 13–17.vi.1982, S. Andersen, L. Lyneborg, V. Michelsen [1♀, ZMUC].

Eudorylas zonatus (Zetterstedt, 1849)

FRANCE: Ardèche, forêt de Païolive, Chibasse, 25.v–27.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Granzon, 25.v–27.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Var, Vidauban, 28.v.2015, T. Ramage, det. P. Withers [1♂, PCPW]; same data as previous, 8.vi.2015 [4♂♂, PCPW].

TOMOSVARYELLINI

Dorylomorpha (Dorylomorpha) confusa (Verrall, 1901)

SPAIN: Cantabria, Fuente Dé, 17.vi.1980, P.J. Chandler, det. P.J. Chandler [1♂, PCPC].

Dorylomorpha (Dorylomorpha) extricata (Collin, 1937)

FRANCE: Ardèche, forêt de Païolive, Granzon, 28.iv–25.v.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Corsica, Forêt d'Agnone, Vizzavona, 910 m, 1–2.vi.2000, A.C. Pont, det. D.J. Gibbs [1♀, BMNH].

Dorylomorpha (Dorylomorpha) imparata (Collin, 1937)

FRANCE: Corsica, Forêt d'Agnone, Vizzavona, 910 m, 1–2.vi.2000, A.C. Pont, det. D.J. Gibbs [1♂, BMNH]; same data as previous, 28–29.v.2000 [1♀, BMNH]; same data as previous, 30–31.v.2000 [1♀, BMNH]. **GREECE*:** Kendriki Makedonia, Kerkini, Beles, 41°17'19"N 23°12'18"E, 25.iv–1.v.2005, G. Ramel, det. D.J. Gibbs [1♂, PCDG]; Kendriki Makedonia, Kerkini, Kerkini marsh site, 41°13'32.8"N 23°05'04.2"E, 45 m, 21–27.iii.2007, G. Ramel, det. D.J. Gibbs [1♂, BMNH]; Kendriki Makedonia, Kerkini, Kerkini marsh site, 41°13'32.8"N 23°05'04.2"E, 45 m, 11–17.iv.2007, G. Ramel, D.J. Gibbs [1♀, BMNH]; same data as previous, 4–10.iv.2007 [1♂, BMNH]; same data as previous, 18–24.iv.2007 [2♂♂, BMNH].

Dorylomorpha (Dorylomorpha) rufipes (Meigen, 1824)

SPAIN*: Santander, near Cosgaya by Rio Neva, 18.vi.1980, P.J. Chandler, det. P.J. Chandler [1♂, PCPC].

Dorylomorpha (Dorylomyia) incognita (Verrall, 1901)

SPAIN: Jaén, Sierra de Cazorla, Roblehondo, 1300 m, 28.v–15.vi.1993, J.L. Nieves [1♂, MNCN]; Madrid, Sierra de Guadarrama, Cercedilla, Estación Biológica El

Ventorrillo, 40°45'16.5"N 4°01'15.5"W, 1450 m, 16–22. vi.1989, J.L. Nieves & C. Rey [1♀, MNCN]; same data as previous, 6–14.vii.1989 [1♀, MNCN]; same data as previous, 14–21.vii.1989 [1♂ 1♀, MNCN].

Dorylomorpha (*Dorylomyza*) *lautereri* Albrecht, 1990

GREECE*: Kendriki Makedonia, Kerkini, Pumping Station site, 41°12'49"N 23°6'12"E, 40 m, 16–22.v.2007, Malaise, G. Ramel, det. D.J. Gibbs [1♀, PCDG].

Tomosvaryella cilifemorata (Becker, 1907)

CYPRUS*: Kalavassos Dam, 34°48'01"N 33°16'02"E, 165 m, 24.iv.2002, M.J. Ebejer, det. D.J. Gibbs [1♂, PCME]. **FRANCE**: Ardèche, Réserve Naturelle Nationale des Gorges de l'Ardèche, 7.vii.2015, J. Claude, det. P. Withers [1♂, PCJC]. **GREECE***: Kendriki Makedonia, Kerkini, Kroussia Mts. site, 41°11'32.4"N 23°03'59.5"E, 190 m, 4–10.vii.2007, G. Ramel, det. D.J. Gibbs [1♂, PCDG]; same data as previous, 27.vi–3.vii.2007 [1♂, PCDG]; Kendriki Makedonia, Kerkini, Midway site,

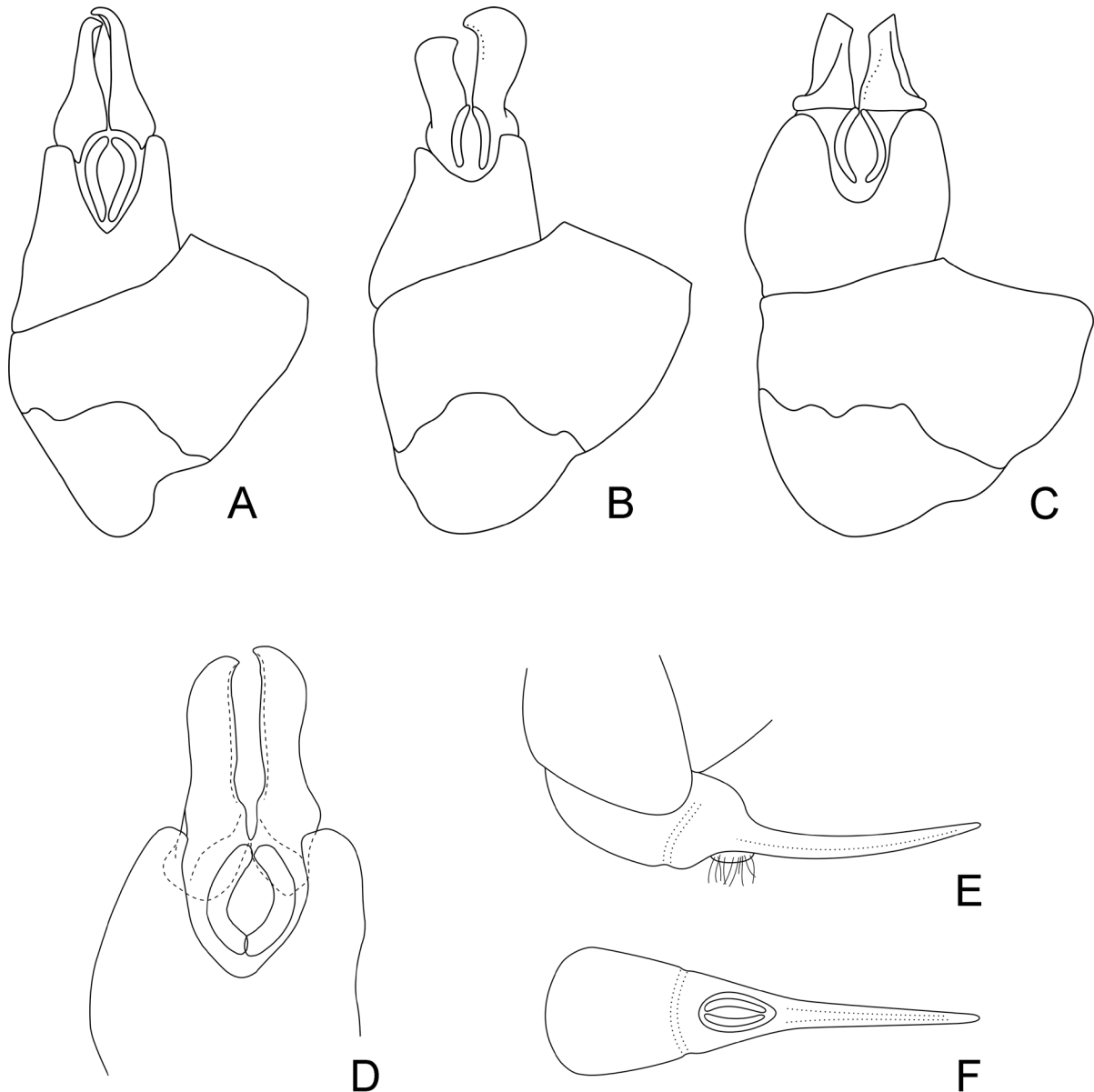


Fig. 6. A. Surstyli of a Spanish *T. cilifemorata* formerly published as *T. nigronitida*. B. Surstyli of the lectotype of *Tomosvaryella disjuncta* (Becker, 1900). C. Lectotype of *Tomosvaryella vicina* (Becker, 1900). D. Surstyli of the holotype of *Tomosvaryella lyneborgi* (Coe, 1969), a junior synonym of *Tomosvaryella cilitarsis* (Strobl, 1910). E. Right lateral view of ovipositor of *Tomosvaryella vicina* (Becker, 1900). F. Dorsal view of ovipositor of *Tomosvaryella vicina* (Becker, 1900).

41°18'49.8"N 23°16'35.6"E, 750 m, 30.vi–6.vii.2008, G. Ramel, det. D.J. Gibbs [1♀, PCDG]. **ITALY**: Sicily, Catania, Randazzo Rummolo (Flascio river), 850 m, 7.vi.1999, M.J. Ebejer, det. M.J. Ebejer [1♂, PCME]. **SPAIN**: Granada, Barranco de Miranda, 8 km SW Orgiva, 300 m, 20.iv.1966, L. Lyneborg [1♂, ZMUC]; Granada, Mecina Bombarón, 800 m, 8.v.1966, L. Lyneborg & M. Langemark [1♂, ZMUC].

Remarks. The Spanish material was, together with a third male from Spain (Almería, Alhama 5 km W, 200–500 m, 28.iii.1966, L. Lyneborg), originally published as *Tomosvaryella nigronitida* Collin, 1958 by Coe (1969). The third specimen could not be located at ZMUC. The other two specimens were dissected and the syntergosternite 8 of one of the males is illustrated in Fig. 6A. Genitalia and outer morphology correspond to *T. cilifemorata* as outlined in Földvári & De Meyer (2000). The latter authors also comment on a possible synonymy of the two species. As *T. nigronitida* is based on the female holotype from Croatia and has been only recorded once thereafter by De Meyer (1995) (a single female from Israel), collecting at the type locality is necessary before a final decision can be made. The male sex of *T. nigronitida* is thus unknown and the species needs to be deleted from the Spanish checklist. Strobl (1909) described this species from Spain under *Pipunculus argyrosticus* Strobl, 1909, which was synonymised with *T. cilifemorata* later by Aczél (1944).

Tomosvaryella cilitarsis (Strobl, 1910)

Tomosvaryella lyneborgi (Coe, 1969) **syn. nov.**

SPAIN: Almería, Tabernas, 8 km N, 14.iii.1966, L. Lyneborg [1♂ (holotype of *T. lyneborgi*), ZMUC]; Granada, Sierra de Contraviesa, 5 km SE Orgiva, 500 m, 18.iv.1966, L. Lyneborg [1♀ (paratype of *T. lyneborgi*), ZMUC]; Mallorca, S'Albufera, Es Comú, 39°46'34"N 3°08'27"E, 2 m, 25.iv.2006, D.J. Gibbs, det. D.J. Gibbs [1♂, PCDG].

Remarks. The type series of *T. lyneborgi* consists of a male holotype and a female paratype. Coe (1969) figures the undissected male terminalia and the female ovipositor. The male syntergosternite 8 was detached from the abdomen to obtain a better view of the surstyli (Fig. 6D) and other genitalic features, and it was found to be a junior synonym of *T. cilitarsis* (for the latter see Kehlmaier 2008b).

Tomosvaryella coquilletti (Kertész, 1907)

GREECE*: Kendriki Makedonía, Kerkini, 41°09'06.5"N 23°11'55.0"E, 13–19.vi.2005, G. Ramel, det. D.J. Gibbs [1♂, PCDG]; **SPAIN***: Burgos, NW of Ora, 19.vi.1980, P.J. Chandler, det. D.J. Gibbs [1♂, PCPC].

Tomosvaryella dentiterebra (Collin, 1949)

EGYPT: Edku Salt Lakes (= Lake Idku), 2.vii.1944, R. Coe [♂ (lectotype), BMNH]. same data as lectotype [1♀ (paralectotype), BMNH]; Lake Karoun (= Qarun), ix.1945, R. Coe [1♀ (paralectotype), BMNH].

Remarks. The species was originally described from Egypt and it has been recently recorded and redescribed from Iran (Majnon Jahromi et al. 2017b).

Tomosvaryella disjuncta (Becker, 1900)

FRANCE: Alpes-Maritimes, Biot, 3–10.x.2010, A. Piton, det. P. Withers [1♂, PCPW]; same data as previous, 11–20.x.2010, A. Piton, det. P. Withers [1♂, PCPW].

Remarks. This is the second record of *T. disjuncta* from Europe and France. The species was originally described from Egypt and only recently recorded from Val les Bains (Ardèche) by Withers (2006). Kuznetsov (1993) redescribed the species and designated a lectotype which has been studied and illustrated (Figs 6B, 7A).

Tomosvaryella freidbergi De Meyer, 1995

GREECE*: Kendriki Makedonía, Kerkini, Pumping St. site, 41°12'48.7"N 23°06'11.9"E, 40 m, 13.–19.vi.2007, G. Ramel, det. D.J. Gibbs [2♂♂, BMNH]; Kendriki Makedonía, Kerkini, Pumping St. site, 41°12'48.7"N 23°06'11.9"E, 40 m, 20–26.vi.2007, G. Ramel, det. D.J. Gibbs [2♂♂, BMNH]; Kendriki Makedonía, Kerkini, Procom site, Promohonas, 41°22'38.1"N 23°21'58.8"E, 60 m, 4–10.vii.2007, G. Ramel, det. D.J. Gibbs [1♂1♀, BMNH]; Kendriki Makedonía, Kerkini, Krousia Mts. base camp, 41°18'35"N 23°03'36"E, 1300 m, 25–31.vii.2007, G. Ramel, det. D.J. Gibbs [3♂♂, BMNH]. **SPAIN**: Canary Islands, Tenerife, near Santiago, 2.iv.1973, P.J. Chandler & C.H. Jackson, det. D.J. Gibbs [1♂, PCDG]; Canary Islands, Tenerife, Purto de Erjos, 2.iv.1973, P.J. Chandler & C.H. Jackson, det. M. Földvári [1♂, PCDG]; Canary Islands, Tenerife, El Medano, 3.iv.1973, P.J. Chandler & C.H. Jackson, det. D.J. Gibbs [1♀, PCDG]; Canary Islands, La Palma, near Las Indias, 26.v.1976, P.J. Chandler, det. M. Földvári [1♂, PCDG]; Canary Islands, La Palma, La Cumbrecita, 29.v.1976, P.J. Chandler, det. D.J. Gibbs [1♂, PCDG]; Asturias, Corros (de Parcal), 31.v.1990, C. Rey [1♂, MNCN]; Cantabria, San Pedro de Bedoya, 17–30.viii.1990, C. Rey [1♀, MNCN]. **TURKEY***: Denizli, Aci Gol, 4.vi.1997, M.J. Ebejer, det. D.J. Gibbs [1♂, PCME].

Tomosvaryella frontata (Becker, 1897)

MALTA: Mellieha Bay, Ghadira, 19–31.viii.1992, B. Petersen [4♂♂ 7♀♀, ZMUC]. **SPAIN***: Mallorca, S'Al-

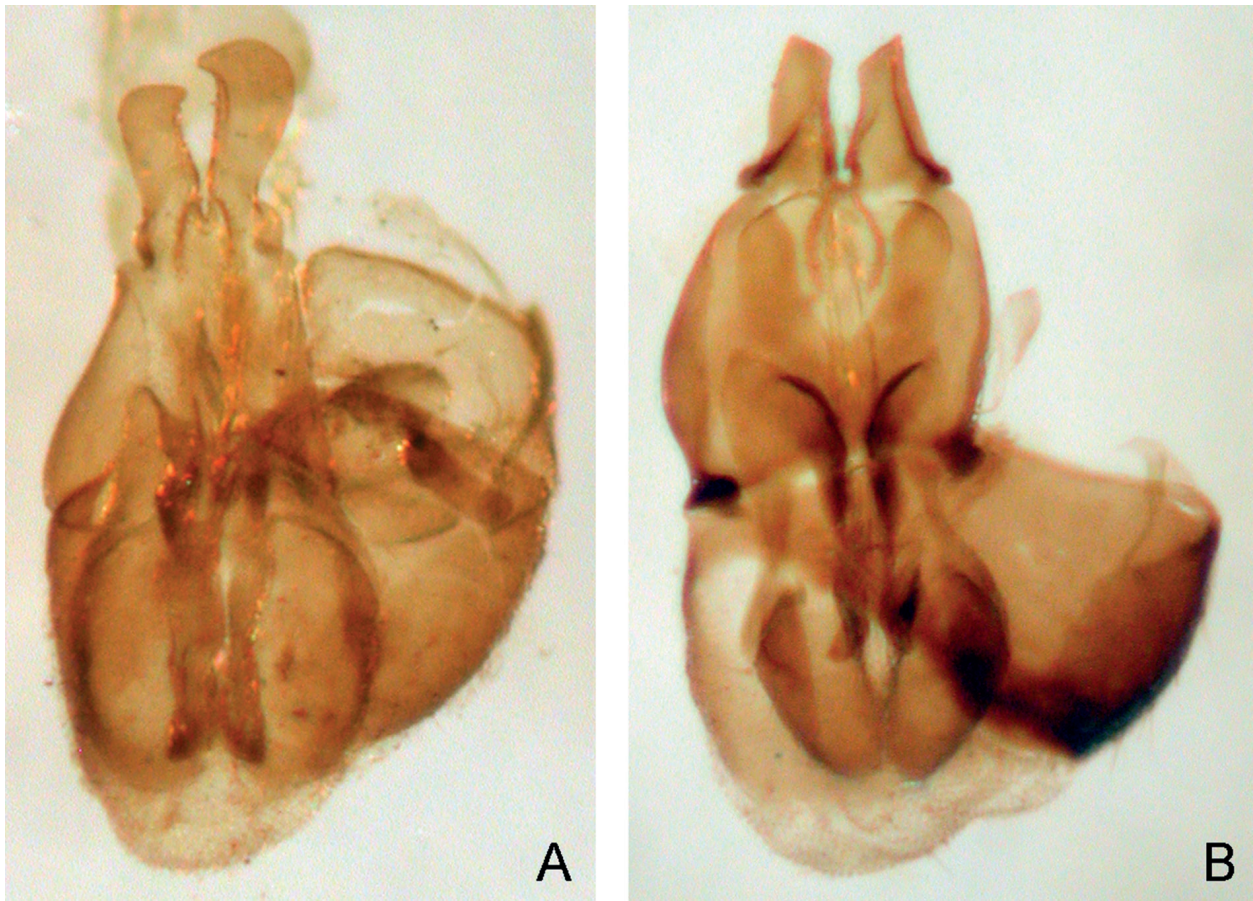


Fig. 7. Dorsal view of surstyli, epandrium and syntergosternite 8 of lectotypes of **A.** *Tomosvaryella disjuncta* (Becker, 1900), and **B.** *Tomosvaryella vicina* (Becker, 1900).

bufera, Sa Roca, 39°47'47"N 3°06'19"E, 2 m, 19.iv.2006, D.J. Gibbs, det. D.J. Gibbs [1♀, PCDG]; Mallorca, Cami des Polls, S'Albufera, 21.v.2006, M.J. Ebejer, det. D.J. Gibbs [1♀, PCME]; Mallorca, S'Albufera, Sa Roca, 39°47'47"N 3°06'19"E, 2 m, 18.v.2007, D.J. Gibbs, det. D.J. Gibbs [3♂♂ 3♀♀, PCDG].

Tomosvaryella geniculata (Meigen, 1824)

CYPRUS*: Lefkas Dam, 34°53'50"N 33°18'19"E, 290 m, 26.iv.2002, M.J. Ebejer, det. D.J. Gibbs [1♀, PCME]. **FRANCE**: Ardèche, forêt de Païolive, Granzon, 25.vii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Chibasse, 25.v–27.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Combe des Bouses, 31.viii–8.ix.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Var, Vidauban, 13.vi.2014, T. Ramage, det. P. Withers [1♂, PCPW]; same data as previous, 22.vi.2014, T. Ramage, det. P. Withers [2♂♂, PCPW]; same data as previous, 8.vi.2015, T. Ramage, det. P. Withers [4♂♂, PCPW]; Corsica, Forêt d'Ag-

none to Cascade des Anglais, Vizzavona, 900–1100 m, 28.v.2000, A.C. Pont, det. D.J. Gibbs [1♂, BMNH]; Corsica, Forêt d'Agnone, Vizzavona, 910 m, 1–2.vi.2000, A.C. Pont, det. D.J. Gibbs [1♀, BMNH]; Ardèche, Gilhac, 44°50'18.3"N 4°46'2.3"E, 339 m, 22.vii.2008, C.J. Palmer, det. D.J. Gibbs [1♂, PCCP]. **GREECE***: Kendriki Makedonia, Kerkini, 41°09'06.5"N 23°11'55.0"E, 23–29.v.2005, G. Ramel, det. D.J. Gibbs [1♀, PCDG]; Kendriki Makedonia, Kerkini, Plateau, Kerkini Mts, 41°18'53"N 23°01'46"E, 1000 m, 8–13.viii.2007, G. Ramel, det. D.J. Gibbs [1♂, BMNH]; Kendriki Makedonia, Kerkini, Plateau, Kerkini Mts, 41°18'59"N 23°01'55"E, 1000 m, 8–13.viii.2007, G. Ramel, det. D.J. Gibbs [1♂, BMNH]. **SPAIN**: Mallorca, S'Albufera, Sa Roca, 18.iv.2001, M.J. Ebejer, det. M.J. Ebejer [1♀, PCME].

Tomosvaryella helwanensis (Collin, 1949)

EGYPT: Helwan, xi.1944, R.L. Coe, B.M. 1946–39 [♂ (lectotype), BMNH]; same data as lectotype [1♂ 3♀♀ (paralectotypes), BMNH].

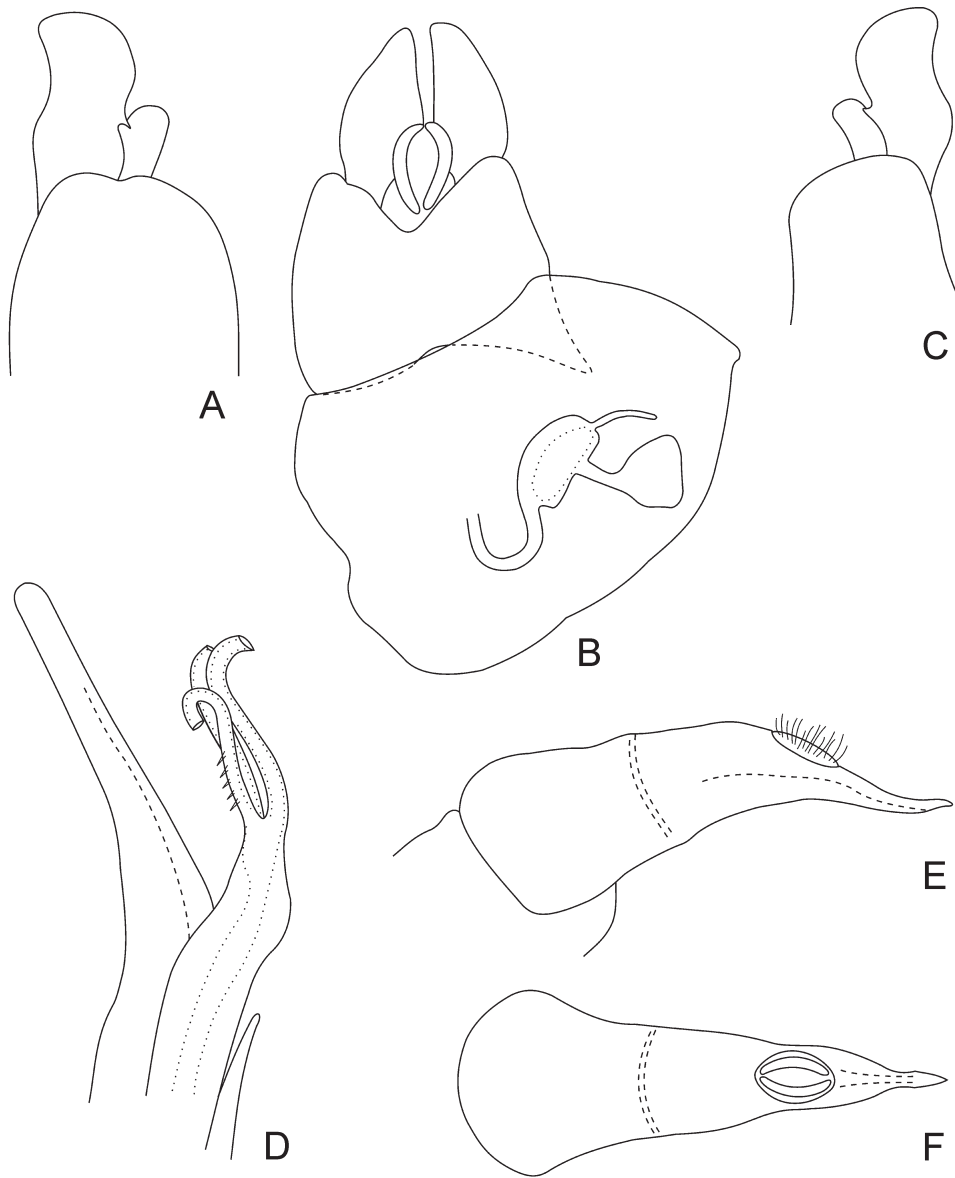


Fig. 8. *Tomosvaryella helwanensis* (Collin, 1949). **A.** Right lateral view of male surstylus. **B.** Strictly dorsal view of sytergosternite 8. **C.** Left lateral view of male surstylus. **D.** Right lateral view of phallus and phallic guide. **E.** Left lateral view of ovipositor. **F.** Dorsal view of ovipositor.

Remarks. The species was originally described from Egypt based on eleven males and nine females and it has not been recorded thereafter. Here, Collin's extensive and detailed description is completed by the illustration of the male and female terminalia (Figs 8A–F) and by the lateral habitus view of the female (Fig. 9) in order to enable a secure identification.

Tomosvaryella hildeae De Meyer, 1997

GREECE*: Chios, Armolia, 38°16'86"N 26°02'91"E, 20.v.2003, C.J. Palmer, det. D.J. Gibbs [1♂ 1♀, PCCP;

1♂, PCDG]. **SPAIN:** Andalucía, above Alcaucin, 36°54'44"N 4°06'17"E, 800–1050 m, 7.vi.2006, D.J. Gibbs, det. D.J. Gibbs [1♂, PCDG].

Tomosvaryella hispanica De Meyer, 1997

SPAIN: Asturias, Corros (de Parcal), 10.v.1990, C. Rey [1♂, MNCN]; Salamanca, Villar de Ciervo, Las Coronas, 17–21.v.2005, H.-P. Tschorsnig [1♂, PCCK].



Fig. 9. Right lateral view of female of *Tomosvaryella helwanensis* (Collin, 1949).

Tomosvaryella inermis De Meyer, 1995

GREECE*: Kendriki Makedonía, Kerkini, Ecotourism site, 41°08'15.6"N 23°13'01"E, 65 m, 20.v–3.vi.2006, G. Ramel, det. D.J. Gibbs [1♂ 1♀, PCDG].

Tomosvaryella israelensis De Meyer, 1995

GREECE*: Kendriki Makedonía, Kerkini, Ecotourism site, 41°08'15.6"N 23°13'01"E, 65 m, 12–18.ix.2006, G. Ramel, det. D.J. Gibbs [1♂, PCDG]; same data as previous, 29.viii–4.ix.2006 [2♂♂, PCDG]; Kendriki Makedonía, Kerkini, Pumping Station site, 41°12'49"N 23°06'12"E, 40 m, 18–24.vii.2007, G. Ramel, det. D.J. Gibbs [1♂1♀, PCDG].

Tomosvaryella kuthyi Aczél, 1944

CYPRUS*: Akrounta, 34°48'48"N 33°05'30"E, 600 m, 24.iv.2002, M.J. Ebejer, det. D.J. Gibbs [1♂, PCME].
FRANCE: Alpes-Maritimes, Biot, 20–26.ix.2010, A. Piton, det. P. Withers [1♂, PCPW]; same data as previous

but 11–20.x.2010, A. Piton, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Granzon, 25.vii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Combe des Bouses, 28.vii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, 31.viii–8.ix.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Bildon, 28.vii–31.viii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Langarneye, 26.vi–10.vii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, 28.vii–3.viii.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Hermitage, 23.v–26.vi.2010, M. Speight, det. P. Withers [1♂, PCPW]; Ardèche, forêt de Païolive, Chibasse, 25.v–27.vi.2010, M. Speight & E. Castella, det. P. Withers [1♂, PCPW]; Pyrénées-Orientales, forêt de la Massane, Col Fondo, 14.ix.2014, J. Garrigue, det. P. Withers [1♂, PCPW]; Pyrénées-Orientales, forêt de la Massane, réserve intégrale, 7.vii.2009, J. Garrigue,

det. P. Withers [1♂, PCPW]; Var, Vidauban, 19.v.2014, T. Ramage, det. P. Withers [2♂♂, PCPW]; same data as previous, 13.vi.2014 [1♂, PCPW]; same data as previous, 28.v.2015 [1♂, PCPW]; same data as previous, 8.vi.2015 [5♂♂, PCPW]. **GREECE***: Kendriki Makedonia, Kerkini, Krousia Mts. site, 41°11'32.4"N 23°03'59.5"E, 190 m, 30.v–5.vi.2007, G. Ramel, det. D.J. Gibbs [2♂♂, BMNH]. **SPAIN**: Almería, Adra, 36°47'24.8"N 3°06'06.6"W, 502 m, 9.v.2012, R. Andrade [2♂♂ 1♀, PCCK]; Catalunya, Barcelona, Pruit, 15 km S Olot, 30 km W Girona, 42°02'39"N 2°27'31"E, 900 m, 4.vii.1997, C. Lange & J. Ziegler [1♀, PCCK]; Mallorca, Puig de Sant Martí, 39°49'29"N 3°05'51"E, 23.iv.2006, D.J. Gibbs, det. D.J. Gibbs [1♂ 1♀, PCDG]; Mallorca, Son Bosc, S'Albufera, 24.v.2006, M.J. Ebejer, det. D.J. Gibbs [1♂ 1♀, PCME].

Tomosvaryella parakuthyi De Meyer, 1995

CYPRUS*: Frenaros, 35°03'04.50"N 33°52'57.66"E, 1.ix–30.x.2018, S. Schiffel [1♂, PCCK].

Tomosvaryella pilosiventris (Becker, 1900)

Tomosvaryella glabrum (Adams, 1905) **syn. nov.**

SPAIN: Canary Islands, Tenerife, Fanabe, 22.vii.1970, J.J. & A. Menier [1♂ 1♀, MNHN]. **TURKEY***: Antalya, Side, green grass plot, 28.ix.2007, N. Vikhrev, det. D.J. Gibbs [1♂, PCDG].

Remarks. The original type series consisted of an unspecified number of males and females collected at Cairo, Assiut and Fayum between November and March (Becker, 1900). At MNHU four specimens were identified that belong to the type series: 2♂♂ 1♀, Fayum, 44775, III; 1♀, Cairo, 44244, XI. The whereabouts of the syntypes from Assiut is unknown. Both present males have been dissected in the past. One male (with missing head) was labelled as lectotype by Sergey Kuznetsov. However, this lectotype designation was apparently never published. The “head-less” male is hereby designated as lectotype in order to fix the name involved and ensure a universal and consistent interpretation of the taxon in the future.

The status of this species involves several nomenclatural acts. Aczél (1944) originally placed *T. pilosiventris* in synonymy under *T. subvirescens* (Loew, 1872), but Kuznetsov (1994) restored *T. pilosiventris* as a good species. Hardy (1949) placed *T. glabrum* (Adams, 1905) in synonymy under *T. subvirescens*, but later De Meyer et al. (2001) reinstated *T. glabrum* as a valid taxon and synonymised *T. tecta* De Meyer, 1993 under *T. glabrum*. The present study revealed that *T. pilosiventris* is conspecific with specimens identified as *T. glabrum* **syn. nov.** by Kehlmaier & Majnon Jahromi (2015), who also studied material originally identified as *T. glabrum* by De Meyer

et al. (2001). Male genitalia are figured in De Meyer (1993).

Tomosvaryella resurgens De Meyer, 1997

SPAIN: Mallorca, Santa Ponça, 23.x.1992, C.J. Palmer, det. D.J. Gibbs [1♂, PCCP]; Mallorca, S'Alqueria, Andratx S'Alqueria, Andrnix, 2.viii.2007, J. Monterde, det. D.J. Gibbs [1♂ 1♀, PCDG]; Mallorca, Puig San Martí, 15.ix.2008, N. Riddiford, det. P. Withers [1♂, PCPW]; Mallorca, Mandrago, 13–14.ix.2007, N. Riddiford, det. P. Withers [1♂, PCPW]; Santa Eugencia, light trap, 10.viii.2005, N. Riddiford, det. P. Withers [1♂, PCPW].

Tomosvaryella sepulta De Meyer, 1997

SPAIN: Mallorca, S'Albufera, Es Comú, 39°46'34"N 3°08'27"E, 2 m, 20.iv.2006, D.J. Gibbs, det. D.J. Gibbs [3♂♂, PCDG]; Mallorca, Puig de Sant Martí, 39°49'29"N 3°05'51"E, 23.iv.2006, D.J. Gibbs, det. D.J. Gibbs [1♀, PCDG]; Andalucía, W of Capilerilla, 36°56'21"N 3°20'26"W, 1480 m, 7.vi.2008, D.J. Gibbs, det. D.J. Gibbs [1♂ 2♀♀, PCDG].

Tomosvaryella trichotibialis De Meyer, 1995

SPAIN: Mallorca, S'Albufera, Es Comú, 39°46'34"N 3°08'27"E, 2 m, 18.v.2007, D.J. Gibbs, det. D.J. Gibbs [1♂, PCDG]; same data as previous, 20.v.2009 [1♀, PCDG]; Andalucía, Sendero vela blanca, 36°44'05"N 2°10'14"W, 240 m, 29.iv.2008, D.J. Gibbs, det. D.J. Gibbs [1♂, PCDG].

Tomosvaryella vicina (Becker, 1900)

EGYPT: Luxor, 44629, ii, T. Becker [♂ (lectotype), MNHU]; same data as lectotype [3♂♂ (paralectotypes), MNHU]; Assiut, 44396, xii, T. Becker [1♂ 1♀ (paralectotypes), MNHU]; Assiut, 44459, xii, T. Becker [1♂ 1♀ and 1 badly damaged specimen (only part of thorax and five legs left), MNHU].

Remarks. De Meyer (1993: fig. 36) redescribed and illustrated the species, listing only the male “holotype” with the label data “4629 II”. This is obviously a misinterpretation and a typo, respectively. In De Meyer (1996), one syntype from Assiut (44459) and three syntypes from Luxor (44629) are mentioned. The original type series consisted of an unspecified number of males and females collected at Assiut and Luxor between December and February (Becker, 1900). At MNHU, nine specimens were identified that belong to the type series. All specimens are pinned on minutens. The four males from Luxor are placed on two insect needles. One male from Luxor has been dissected in the past and was labelled as lectotype by Sergey Kuznetsov. This lectotype designa-

tion was apparently never published. The dissected male from Luxor is hereby designated as lectotype in order to fix the name involved and ensure a universal and consistent interpretation of the taxon in the future. The male syntergosternite 8 (Figs 6C, 7B) and the female ovipositor are illustrated (Figs 6E & F).

DISCUSSION

Ninety-eight named species of Pipunculidae from eleven countries (Cyprus, Egypt, France, Greece, Italy, Malta, Morocco, Portugal, Spain, Tunisia, and Turkey) are included in this work. Among them there are three new species described in full. In addition, 56 first national records were compiled, demonstrating that the knowledge on the distribution of big-headed flies in the Mediterranean Basin is still very fragmentary for most countries. But even in comparatively well-studied countries like Spain, 13 species could be added to the national list. In detail, the number of named species in the present paper, first national records, and newly described species are: Cyprus (6 named species / 4 first records / 0 new species), Egypt (1/0/0), France (42/6/1), Greece (31/23/0), Italy (3/0/0), Malta (2/0/0), Morocco (1/0/0), Portugal (2/0/0), Spain (56/13/3), Tunisia (5/5/0), and Turkey (10/8/0). Appendix II provides national checklists for selected countries, whose pipunculid fauna has not been summarised in the past years (Cyprus, Egypt, Greece, Malta, Morocco, Tunisia, and Turkey). The national checklist for Portugal currently comprises 45 species (Kehlmaier & Andrade 2016). The national checklist for Italy stands at 105 species (Kehlmaier 2008a, 2010a). The national checklist for continental France (Withers 2006) must be complemented by the addition of *C. brachium* sp. n., *C. grandimembranus*, *E. angustimembranus*, *E. ibericus*, *J. pilosa*, and *P. elegans*, counting a total of 115 species. And the national checklist for Spain (Kehlmaier 2003, 2005a; Kehlmaier & Assmann 2008; Kehlmaier & Alonso-Zarazaga 2018) now counts 101 species, with *Ch. zyginae*, *C. brachium* sp. n., *C. penultimus*, *C. vittipes*, *D. holosericeus*, *D. rufipes*, *E. johnenae*, *P. oldenbergi*, *P. zugmayeriae*, *T. coquilletti*, *T. frontata*, *T. osito* sp. n., and *T. pugiunculus* sp. n. added in this study.

Due to the lack of taxonomic workers, expertise and funds on Pipunculidae, a targeted and systematic collecting of the family in the Mediterranean has hardly ever been conducted in the past. Although pipunculids lead a rather concealed life, even a couple of collecting days can contribute valuable faunistic insights to regional faunas as shown by Kehlmaier (2010a), who hand-netted 83 specimens belonging to 18 species in nine collecting days on the Italian island of Sardinia. The majority of records presented here must either be regarded as by-catches of fellow entomologists, or originated from small biodiversity projects, highlighting the importance of such initia-

tives often organised by enthusiasts and amateur entomologists and therefore lacking any substantial financial support. Their commitment as well as scientific expertise cannot be overrated in this respect. Two examples that we would like to point out are The Albufera International Biodiversity Project on Mallorca (TAIB) (Mallorca, Balear Islands, Spain; <https://www.taib.info/en/>) and the Wetland Kerkini Biodiversity Study (Central Macedonia, Greece; <http://www.ramel.org/lake-kerkini/>). TAIB has been running since 1989 and focuses on the biodiversity of the S'Albufera Natural Park. Since 1989 regular trapping projects are undertaken during spring and autumn field excursions, training programmes, and cooperations with taxonomists, including four Diptera specialists resulting in a total of 20 Pipunculidae species including the two newly described *Tomosvaryella* (Table 1). The Wetland Kerkini Biodiversity Study took off as a one-man-project in 2001, surveying the biotic diversity for Lake Kerkini and its associated Nature Reserves. The Pipunculidae material studied in the present work was collected during 2005–2007 and so far 22 species of Pipunculidae have been identified most of them new to the Greek fauna (Table 2).

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Appendix I. Characterisation of selected collecting localities.

- **El Boalo:** Malaise trap placed in a degraded *Quercus pyrenaica* Willd. forest.
 - **El Pardo:** The study site is dominated by a mature *Quercus ilex* L. forest with isolated *Qu. suber* L., *Qu. coccifera* L. and *Fraxinus* L. The climate is of continental Mediterranean character. Malaise trap.
 - **Estación Biológica El Ventorrillo:** Spain, Madrid, Sierra de Guadarrama, Cercedilla, Estación Biológica El Ventorrillo, 40°45'16.5"N 4°01'15.5"W. Malaise trap placed on a south-west facing slope between a mixed deciduous forest dominated by *Acer pseudoplatanus* L. and *Ulmus glabra* Huds. and a mature growth of *Pinus sylvestris* L. The transition zone between the two being characterized by small clearings, dominated by a variety of bushes like *Cytisus* L., *Crataegus* L., *Rubus* L., *Rosa* L., *Cistus* L., *Santolina* L., *Juniperus* L., *Prunus* L. etc. The climate is subhumid Mediterranean with cold winters.
 - **Forêt de la Massane:** France, Pyrénées-Orientales, forêt de la Massane, 42°28'31"N 3°01'09"E. One of the last remaining ancient forests in the Mediterranean basin. It comprises 336 hectares of mixed old forest, much of it dead wood, with principally beech (*Fagus sylvatica* L.), mixed with holm-oak (*Quercus ilex* L.), downy oak (*Quercus pubescens* Willd.) and sessile oak (*Quercus petraea* (Matt.) Liebl.).
 - **Forêt de Païolive:** France, Ardèche, forêt de Païolive, 44°23'40"N 4°10'41"E. This area covers 15 square kilometres and is dominated by river gorges cut by the River Chassezac.
- There are extensive dry grasslands and garrigue-type terrain, with riverine forests of mainly downy oak (*Quercus pubescens* Willd.) and holm-oak (*Quercus ilex* L.).
- **Kerkini:** Greece, Kendriki Makedonia, Lake Kerkini, 41°10'46"N 23°9'20"E. This locality refers to the Wetland Kerkini Biodiversity Study (courtesy of Gordon J. Ramel, <http://www.ramel.org/lake-kerkini/>) which covers many habitats from the actual lake shore right into the nearby mountains. For detailed information visit the project's homepage.
 - **S'Albufera:** Spain, Balear Island, Mallorca, 39°47'50"N 3°6'22.5"E. An extensive wetland area in north Mallorca close to Port d'Alcúdia. Surveys were carried out on behalf of TAIB (The Albufera International Biodiversity Project, courtesy of Nick J. Riddiford, <https://www.taib.info/en/>) in April and May 2006 and May 2007 by D.J. Gibbs. Sampling was confined to sweep-netting but included visits to many habitats both within and adjacent to S'Albufera Natural Park. Particularly the dunes of Es Comú and the dry, Pine covered low hills of Puig san Marta were productive collecting localities.
 - **Vidauban:** France, Var, Vidauban, Vidauban golf club, 43°23'36" 6°27'51"E. This area is situated in the Plaine des Maures, an area dominated by parasol pine (*Pinus pinea* L.) and cork-oak (*Quercus suber* L.). There are also numerous temporary or permanent ponds in the area.

Appendix II. A systematic checklist of named Pipunculidae of selected Mediterranean countries.
 [*Probably misidentified (see Kehlmaier 2005a: 312; Kehlmaier 2005b: 12)].

	Egypt	Greece	Malta	Morocco	Tunisia	Turkey	Cyprus
Number of recorded species	23	41	4	13	8	17	6
Chalarinae Aczél, 1939							
<i>Chalarus</i> Walker, 1834							
<i>C. brevicaudis</i> Jervis, 1992		X		X			
<i>C. clarus</i> Jervis, 1992		X					
<i>C. indistinctus</i> Jervis, 1992		X					
<i>C. spurius</i> (Fallén, 1816)		X					
<i>Verrallia</i> Mik, 1899							
<i>V. aucta</i> (Fallén, 1817)		X			X		X
Nephrocerinae Aczél, 1939							
<i>Nephrocerus</i> Zetterstedt, 1838							
<i>N. scutellatus</i> (Macquart, 1834)		X					
Pipunculinae Walker, 1834							
Cephalopsini							
<i>Cephalops</i> Fallén, 1810							
<i>C. (Cephalops) conjunctivus</i> Coe, 1958		X				X	
<i>C. (Parabeckerias) obtusinervis</i> (Zetterstedt, 1844)		X					
<i>C. (Semicephalops) perspicuus</i> (de Meijere, 1907)		X					
<i>C. (Semicephalops) straminipes</i> (Becker, 1900)		X					
<i>C. (Semicephalops) ultimus</i> (Becker, 1900)		X				X	
Eudorylini							
<i>Claraeola</i> Aczél, 1940							
<i>C. clavata</i> (Becker, 1897)		X					
<i>C. cypriota</i> Kehlmaier, 2005							X
<i>C. conjuncta</i> (Collin, 1949)	X				X		
<i>Clistoabdominalis</i> Skevington, 2001							
<i>C. dilatatus</i> (De Meyer, 1997)				X			
<i>C. nitidifrons</i> (Becker, 1900)	X						
<i>C. ruralis</i> (Meigen, 1824)	X	X	X		X	X	
<i>C. sinaiensis</i> (De Meyer, 1995)	X						
<i>C. trochanteratus</i> (Becker, 1900)	X				X	X	
<i>C. tumidus</i> (De Meyer, 1997)		X					
<i>Dasydorylas</i> Skevington, 2001							
<i>D. gradus</i> Kehlmaier, 2005						X	
<i>D. holosericeus</i> (Becker, 1897)		X					
<i>D. setosus</i> (Becker, 1908)				X			
<i>Eudorylas</i> Aczél, 1940							
<i>E. auctus</i> Kehlmaier, 2005		X					
<i>E. blascoi</i> De Meyer, 1997		X				X	

	Egypt	Greece	Malta	Morocco	Tunisia	Turkey	Cyprus
<i>E. chvalai</i> Kozánek, 1988		X					
<i>E. coloratus</i> (Becker, 1897)		X					
<i>E. fluviatilis</i> (Becker, 1900)	X	X				X	
<i>E. fuscipes</i> (Zetterstedt, 1844)						X	
<i>E. gemellus</i> Kehlmaier, 2005						X	
<i>E. ibericus</i> Kehlmaier, 2005				X	X		
<i>E. inferus</i> Collin, 1956		X					
<i>E. mediterraneus</i> De Meyer & Ackland, 1997		X	X				
<i>E. obliquus</i> Coe, 1966		X				X	X
<i>E. obscurus</i> Coe, 1966		X				X	
<i>E. pannonicus</i> (Becker, 1897)	??	X					
<i>E. straeleni</i> (Janssens, 1955)		X					
<i>E. subfascipes</i> Collin, 1956		X					
<i>E. trapezoids</i> (Becker, 1900)						X	
<i>E. triangularis</i> Kehlmaier, 2005						X	
<i>E. trigonus</i> (Becker, 1921)		X					
<i>E. unicolor</i> (Zetterstedt, 1844)		X					
<i>E. zermattensis</i> (Becker, 1897)		X				X	
Pipunculini							
<i>Pipunculus</i> Latreille, 1802							
<i>P. carlestolrai</i> Kuznetsov, 1993				X			
<i>P. tumbarinus</i> Kehlmaier, 2010					X		
Tomosvaryellini							
<i>Dorylomorpha</i> Aczél, 1939							
<i>D. (Dorylomorpha) imparata</i> (Collin, 1937)		X					
<i>D. (Dorylomyza) lautereri</i> Albrecht, 1990		X					
<i>Tomosvaryella</i> Aczél, 1939							
<i>T. aegyptium</i> Kuznetsov, 1994	X						
<i>T. cilifemorata</i> (Becker, 1907)	X	X		X	X		
<i>T. coquilletti</i> (Kertész, 1907)		X					
<i>T. debrynyi</i> De Meyer, 1995				X			
<i>T. demeyeri</i> Kuznetsov, 1993	X						
<i>T. dentiterebra</i> (Collin, 1949)	X						
<i>T. disjuncta</i> (Becker, 1900)	X						
<i>T. docta</i> De Meyer, 1995	X						
<i>T. freidbergi</i> De Meyer, 1995	X	X				X	
<i>T. frontata</i> (Becker, 1897)	X		X	X	X		
<i>T. geniculata</i> (Meigen, 1824)		X		X			X
<i>T. helwanensis</i> (Collin, 1949)	X						
<i>T. hildeae</i> De Meyer, 1997		X					
<i>T. inermis</i> De Meyer, 1995		X					
<i>T. inopinata</i> De Meyer, 1995	X						

	Egypt	Greece	Malta	Morocco	Tunisia	Turkey	Cyprus
<i>T. israelensis</i> De Meyer, 1995		X					
<i>T. kuthyi</i> Aczél, 1944		X	X	X		X	X
<i>T. minima</i> (Becker, 1897)				X			
<i>T. mutata</i> (Becker, 1897)	X			X			
<i>T. nodosa</i> De Meyer, 1995	X						
<i>T. olympicola</i> (Janssens, 1955)		X					
<i>T. parakuthyi</i> De Meyer, 1995	X						X
<i>T. pilosiventris</i> (Becker, 1900)	X					X	
<i>T. pusilla</i> De Meyer, 1995	X						
<i>T. subvirescens</i> Loew, 1872	X						
<i>T. trichotibialis</i> De Meyer, 1995				X			
<i>T. vicina</i> (Becker, 1900)	X						