# NEW AND INTERESTING TACHINIDAE FROM GREECE

by Theo Zeegers

Eikenlaan 24, NL 3768 EV Soest, The Netherlands. E-mail: th.zeegers@xs4all.nl

#### **ABSTRACT**

Interesting records of Tachinidae from Greece are described, based on recent trips to Greece by Dutch dipterists. Four species are mentioned for the first time from Greece, Gonia maculipennis, Loewia papei, Macquartia viridana and Plesina claripennis, of which the second and last are also new records for Europe. It seems fair to say that compared to many other European countries, the Greek tachinid fauna is still understudied.



Figures 1–2. Views of two localities visited by the author. 1. Lesser Prespa Lake in northwestern Greece, at the Macedonian and Albanian border. This is one of the best preserved lakes in the Balkans (together with Skadarsko Lake on the border of Montenegro and Albania). In the background are the Albanian Mountains. 2. Gorge at the lower part of the Taygetos Mountains on the Peloponnesos Peninsula, looking down at the plain at Sparti. Gorges like this one are rich in Tachinidae and Rhinophoridae.

### INTRODUCTION

In recent years, our knowledge of the Tachinidae from southern Europe has rapidly developed. The fauna of the Iberian Peninsula was treated by Tschorsnig (1992) and Tschorsnig et al. (1997). The fauna of Italy was treated by Cerretti (2010). Hubenov (2008) gave a checklist of the Tachinidae from the Balkans. The fauna of Greece is relatively little investigated. Cerretti & Ziegler (2004) provided data on 130 species they collected from mainland Greece and gave the total number of known species from the mainland as 302 and from Greece as 334. They observed that data from the islands and from the Peleponnesos Peninsula are largely lacking. Hubenov (2008) provided a checklist of the tachinids of the Balkans and listed 331 species from the whole of Greece. His checklist, however, lacks annotations.

Several Dutch dipterists have visited Greece in recent years. I visited the Pindos Mountains in 2005, Pindos again and Prespa in 2015 and the Peloponnesos in 2016 (Figs. 1, 2). Gerard Pennards visited Lefkas in 2004 and Zakynthos in 2008. Wouter van Steenis visited Sterea and the Peleponnesos in 2012. Crete was visited by John Smit in 1996 and by André van Eck in 2008, as was Rhodos. The Tachinidae collected by these dipterists were donated to the author.

This article presents the results of these trips, as far as they are new or otherwise interesting.

The species are treated in alphabetical order sorted by subfamily. Localities are ordered from north to south. Records are by the author, unless indicated otherwise. All material mentioned is stored in the author's collection.

#### RESULTS

### **Subfamily Dexiinae**

Stomina caliendrata (Rondani, 1862). Lefkas: Genli, 1 male, 21.vi.2004, leg G.W.A. Pennards. Recorded for Greece by Hubenov (2008).

Stomina calvescens Herting, 1977. Zakynthos: Agios sostis, 2 males, 7.vii.2008, leg G.W.A. Pennards. Recorded for Greece by Hubenov (2008).

*Zeuxia aberrans* (Loew, 1847). Peloponnesos: Messinia, Kardamyli, Exochori, Viros Gorge, 36°54′N 22°17′E, 500 m, 1 male, 13.v.2016. Recorded for Greece by Hubenov (2008).

Zeuxia erythraea (Egger, 1856). Peloponnesos: Arcadia, Kato Lousi, 37°58′N 22°08′E, 1000 m, 1 male, 9.v.2016. Recorded for Greece by Hubenov (2008).

#### **Subfamily Exoristinae**

Amphicestonia dispar Villeneuve, 1939 (Figs. 3–4). Western Macedonia: Prespa, Mt. Devas, 40°49′N 21°02′E, 1350 m, 1 female, 15.v.2016 (hilltopping); Peloponnesos: Archaea, Kalavryti, Vrachni, 38°02′N 22°11′E, 1200 m, 1 male, 10.v.2016; Arcadia, Theoktisto, 37°49′N 22°08′E, 500 m, 1 male, 9.v.2016. Several records by Cerretti & Ziegler (2004).

On the one hand, this species is highly distinctive: only 3 postsutural dorsocentral setae present, scutellum black with erect apical setae, base of radial vein with one very strong seta, sixth costal section longer than fourth. The male has distinct sexual patches of specialized hairs on the ventral side of tergite 4 (Fig. 3; shown also in figs. 1C,D in Cerretti et al. 2014, based on a specimen from Greece). Many of these features are shared with the genus Lydella Robineau-Desvoidy, 1830, from which Amphicestonia differs by the low number of humeral setae (2 strong ones and sometimes a smaller inner one) and the narrow vertex (narrower than width of one eye). In the male, there is a strong keel between the sexual patches. These patches are located in a strong depression in the fourth tergite and covered with very long, fluffy hairs.

On the other hand, this species is difficult to recog-

nize because its variability is much larger than the literature would suggest. Both of my males have strong discal setae on both tergites 3 and 4, and therefore do not key out to *Amphicestonia* in the Palaearctic generic key of Tschorsnig & Richter (1998). Also, they have a bare prosternum, which was thought to be a characteristic of only *A. perplexa* Mesnil, 1963, described from Tadjikistan. The shape and size of the sexual patches in the male as well as the long setae on the hind metatarsus (Fig. 4), however, agree with *A. dispar*. The conclusion is that *A. dispar* is much more variable than previously understood.





**Figures 3–4.** Amphicestonia dispar, male. **3.** Lateral view of abdomen showing large sexual patch and the central keel separating it from the patch on the other side. **4.** Lateral view of hind tarsus, showing long setae. (Photos by author)

Baumhaueria microps Mesnil, 1963 (Fig. 5). Ioannina: Konitsa, Mt. Trapezina, 40°02′N 20°47′E, 1 male, 8.v.2005; between Vikos – Elafotopos, 39°55′N 20°41′E, 5 males, 4.v.2005.

Specimens found in numbers on flowers of Euphor-

bia sp. Already mentioned from three localities in Greece by Cerretti & Ziegler (2004). Apparently, the species is not rare in the Pindos Mountains; however, it is difficult to find due to the lack of flowers in early spring.



**Figure 5.** Baumhaueria microps, lateral habitus, showing the characteristic small eye. (Photo by J. Almeida)

Gonia maculipennis Egger, 1862 (Fig. 6). Western Macedonia: Prespa, Psarades, 40°49′N 21°04′E, 850 m, 5 males, 14.v.2016. First record for Greece and the Balkans.

The specimens were observed late in the afternoon on flowers of a *Bellis*-like plant together with *Gonia ornata* Meigen, 1826. They could not be found around noon. According to Tschorsnig *et al.* (2013), the distribution of this conspicuous species is disjunct: a western population in Spain and an eastern one in eastern Europe.



**Figure 6.** *Gonia maculipennis*, dorsal habitus. (Photo by P. Alvarez Fidalgo)

*Pseudogonia rufifrons* (Wiedemann, 1830). Zakynthos: Agios sostis, 1 female, 9.vii.2008, leg G.W.A. Pennards. Recorded for Greece by Hubenov (2008).

*Phorocera grandis* (Rondani, 1859). Epiros: Kranea, NE of Metsovo, 39°53′N 21°19′E, many specimens, 17.v.2015. Several records by Cerretti & Ziegler (2004).

This species was found in very large numbers in a pine forest heavily infested by *Thaumetopoea pityocampa* (Denis & Schiffermüller, 1775). In Central Europe, *Euproctis* Hübner, 1819 is considered to be the primary host, although host records are available for *Thaumetopoea* Hübner, 1820 (Stipdonk & Zeegers 2010). For this record, *Thaumetopoea* seems to be quite likely the host as well.

### Subfamily Phasiinae

Besseria zonaria (Loew, 1847). Crete: Kalamafka, 2 males, 2.v.1996, leg J. Smit. Recorded for Greece by Hubenov (2008).

Cistogaster mesnili (Zimin, 1966). Lefkas: Genli, 3 males, 21.vi.2004, leg G.W.A. Pennards. Recorded for Greece by Hubenov (2008).

*Clairvillia pninae* Kugler, 1971. Rhodos: Trianda, Filerimos, 1 male, 17.ix.2008, leg A. van Eck. Recorded for Greece by Hubenov (2008).

Clytiomyia dupuisi Kugler, 1971. Lefkas, Genli, 1 male, 21.vi.2004, leg Pennards; Crete: Rethymno, Maroulas, 1 female, 26.iv.2008, leg A. van Eck. Recorded for Greece by Hubenov (2008).

Clytiomyia sola (Rondani, 1861). Ioannina: Mt. Vikos, 1 male, 24.vi.2004, leg G.W.A. Pennards; Thessalia: Pilion, Tsangarada, Myiopotamos, 39°22′N 23°12′E, 1 male, 14.v.2012, leg W. van Steenis; Sterea Ellada: Fthiotida Mt., S. of Iti, 650 m, 38°45′N 22°24′E, 1 male, 15.v.2012, leg W. van Steenis; Crete: Melambes, 1 female, 6.v.1999, leg J. Smit. Recorded for Greece by Hubenov (2008).

Cylindromyia auriceps (Meigen, 1838). Gliki, 1 male & 1 female, 30.vi.2004, leg G.W.A. Pennards; Thessalia: Pilion, Tsangarada, Myiopotamos, 39°22′N 23°12′E, 1 female, 14.v.2012, leg W. van Steenis; Zakynthos: Agios sostis, 1 male, 9.vii.2008, 1 male & 1 female, 13.vii.2008, leg GWA Pennards; Peloponnesos: Akrogiali, river mouth, 36°57′N 22°09′E, 1 female, 17.v.2012, leg W. van Steenis; Crete: Rethymno, Platanias, 1 female, 27.iv.2008, leg A. van Eck. Recorded for Greece by Hubenov (2008).

*Cylindromyia pilipes* (Loew, 1844). Zakynthos: Agios sostis, 2 males, 8.vii.2008, leg G.W.A. Pennards. Recorded for Greece by Hubenov (2008).

- Cylindromyia rufipes (Meigen, 1824). Thessalia: Pilion, Tsangarada, Myiopotamos, 39°22'N 23°12'E, 1 female, 14.v.2012, leg W. van Steenis. Recorded for Greece by Hubenov (2008).
- Cylindromyia xylotina (Egger, 1860). Peloponnesos: Karyes, 25 km. N. of Sparti, 890 m, 37°18′N 22°25′E, 1 female, 18.v.2012, leg W. van Steenis. Recorded for Greece by Hubenov (2008).
- Gymnosoma clavatum (Rohdendorf, 1947). Rhodos: Ialissos, 36°24'N 28°10'E, 1 female, 30.iv.2003, leg J. Smit; Crete: Rouvas Gorge, 1 male, 4.v.1999, leg J. Smit. Recorded for Greece by Hubenov (2008).
- Gymnosoma dolycoridis Dupuis, 1961. Thraki: Evros, 1 male, 28.iv.2000, leg W. van Steenis; Zakynthos, Agios sostis, 1 male, 17.vii.2008, leg G.W.A. Pennards. Recorded for Greece by Hubenov (2008).
- Labigastera nitidula (Meigen, 1824). Crete: Rethymno, Platanias, 1 male, 27.iv.2008, leg A. van Eck. Recorded for Greece by Hubenov (2008).
- Leucostoma tetraptera (Meigen, 1824). Zakynthos: Agios sostis, 1 female, 14.vii.2008, leg G.W.A. Pennards. Recorded for Greece by Hubenov (2008).
- Phasia mesnili (Draber-Mońko, 1965). Zakynthos: Agios sostis, 1 female, 9.vii.2008, 1 female, 13.vii.2008, leg G.W.A. Pennards. Recorded for Greece by Hubenov (2008).

## **Subfamily Tachininae**

- Loewia brevifrons (Rondani, 1856). Peloponnesos: Archaea: Kalavryti, Vrachni, 38°02'N 22°11'E, 1200 m, many specimens, 10.v.2016. Recorded for Greece by Hubenov (2008).
- Loewia papei Cerretti, Lo Giudice & O'Hara, 2014. Peloponnesos: Archaea: Kalavryti, Vrachni, 38°02'N 22°11′E, 1200 m, 1 male & 1 female, 10.v.2016. First record for Europe.

The specimens were collected from umbellifer flowers amongst a large number of *Loewia brevifrons*. The species was previously only known from Turkey.

- Macquartia viridana Robineau-Desvoidy, 1863. Ioannina: Vikos Gorge near Vikos, 39°56'N 20°42'E, 2 females, 5.v.2005. First record for Greece.
- Nemoraea pellucida (Meigen, 1824). Peloponnesos: Archaea: Kalavryti, 38°04′N 22°08′E, 750 m, 1 female, 10.v.2016. Recorded for Greece by Hubenov (2008).
- Plesina claripennis Mesnil, 1953. Zakynthos: Mt. Vrachionas, 756 m, 1 male, 16.vii.2008, hilltopping, leg G.W.A. Pennards. First record for Europe.

Previous records of this species from Europe were misidentifications of P. nigroscutellata. Therefore, this seems to be the first genuine record for Europe.

Plesina nigroscutellata Cerretti & Tschorsnig, 2008. Zakynthos: Mt. Vrachionas, 756 m, 3 males & 1 female, 16.vii.2008, hilltopping, leg G.W.A. Pennards.

Recorded from Crete by Cerretti & Tschorsnig (2008); not previously recorded from the Greek main-

Both species of *Plesina* were found together walking on rocks at a hilltop while waving their wings in a tephritid-like way (G.W.A. Pennards, pers. comm.). Tachina praeceps Meigen, 1824. Ioannina: Vikos Gorge near Klidonia, 39°57′N 20°40′E, 1 male, 9.v.2005; Vikos Gorge near Vikos, 39°56'N 20°42'E, 1 male & 1 female, 5.v.2005; Ioannina: Aristi, 1 female, 25.vi.2004, leg G.W.A. Pennards; Zakynthos, Agios sostis, 2 males & 1 female, 9.vii.2008, leg G.W.A. Pennards; Kreta: Venerato, 2 males, 7.v.1999, leg J. Smit.

Cerretti & Ziegler (2004) mentioned only one record. Given the records above, this species is actually widespread and not rare in Greece.

# CONCLUSIONS

This article provides new and interesting records of Tachinidae from Greece. It mentions four species new for Greece, including two new to Europe, raising the total number of Tachinidae recorded for Greece to 335. This is still relatively low in comparison with well investigated countries like the Netherlands (336 species, Zeegers et al. 2016) and Italy (650 species, Cerretti 2010). It seems fair to say that the Greek tachinid fauna can be expected to be much richer than currently known.

# **ACKNOWLEDGEMENTS**

I would like to thank my Dutch colleagues André van Eck, Gerard Pennards, Jan & John Smit and Wouter van Steenis for sharing their interesting material. Zdravko Hubenov kindly helped me with finding relevant literature. Jorge Almeida and Piluca Alvarez kindly gave permission to use their photos. Pierfilippo Cerretti kindly shared his thoughts on Amphicestonia.

#### REFERENCES

- Cerretti, P. (2010) I tachinidi della fauna italiana (Diptera Tachinidae) con chiave interattiva dei generi ovestpaleartici. Volumes I & II. Centro Nazionale Biodiversità Forestale, Verona. 573 pp. (Vol. I) + 339 pp. (Vol. II) + CD ROM.
- Cerretti, P., Di Giulio, A., Romani, R., Inclán, D.J., Whitmore, D., Di Giovanni, F., Scalici, M. & Minelli, A. (2015) First report of exocrine epithelial glands in oestroid flies: the tachinid sexual patches (Diptera: Oestroidea: Tachinidae). Acta Zoologica, 96, 383–397. [First published online on 16 June 2014; DOI: 10.1111/azo.12085.]
- Cerretti, P. & Tschorsnig, H.-P. (2008) A new species of *Plesina* Meigen (Diptera: Tachinidae) from the Mediterranean. Stuttgarter Beiträge zur Naturkunde A (Biologie), N. Ser., 1, 445–450.
- Cerretti, P. & Ziegler, J. (2004) Chorologic data on tachinid flies from mainland Greece (Diptera, Tachinidae). Fragmenta Entomologica, 36, 275–317.
- Hubenov, Z. (2008) Composition and zoogeographical characteristics of the family Tachinidae (Insecta: Diptera) in the Balkan countries. Acta Zoologica Bulgarica, 60, 243–265.
- Stipdonk, A. van & Zeegers, T. (2010) Eiafzet van de sluipvlieg *Phorocera grandis* op de eikenprocessierups *Thau*metopoea processionea (Diptera: Tachinidae, Lepidoptera: Thaumetopoeidae). Nederlandse Faunistische Mededelingen, 35, 69–72.
- Tschorsnig, H.-P. (1992) Tachinidae (Diptera) from the Iberian Peninsula and Mallorca. Stuttgarter Beiträge zur *Naturkunde. Serie A (Biologie)*, 472, 1–76.
- Tschorsnig, H.-P., Andersen, S. & Blasco-Zumeta, J. (1997). New or interesting records of Tachinidae (Diptera) from the Iberian Peninsula. Stuttgarter Beiträge zur Naturkunde. Serie A (Biologie), 556, 1–46.
- Tschorsnig, H.-P., Richter, V.A., Cerretti, P., Zeegers, T., Bergström, C., Vaňhara, J., Van de Weyer, G., Bystrowski, C., Raper, C., Ziegler, J., Hubenov, Z. (2013) Tachinidae. In: Pape, T. Ed., Fauna Europaea: Diptera, Brachycera. [Available at http://www.fauna-eu.org, version 2.6c.]
- Tschorsnig, H.-P. & Richter, V.A. (1998) Family Tachinidae. Pp. 691–827. In: Papp, L. & Darvas, B., eds., Contributions to a manual of Palaearctic Diptera (with special reference to flies of economic importance). Volume 3. Higher Brachycera. Science Herald, Budapest. 880 pp.
- Zeegers, T., Belgers, D., Dek, N.-J. & Oving, B. (2016) Vijfde aanvulling op de naamlijst van Nederlandse sluipvliegen (Diptera: Tachinidae). Nederlandse Faunistische Mededelingen, 46, 37–42.