An update of distribution records of *Helina* R.-D. and other genera of the subfamily Phaoniinae (Diptera: Muscidae) from Bulgaria

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ZIELKE E. 2018: An update of distribution records of *Helina* R.-D. and other genera of the subfamily Phaoniinae (Diptera: Muscidae) from Bulgaria. *Acta Musei Moraviae, Scientiae biologicae* 103(2): 249–267. – Records of distribution in Bulgaria are presented for the species of the genera *Atherigona* Rondani (1 species), *Eginia* Robineau-Desvoidy (1 species) and *Helina* Robineau-Desvoidy (38 species). A number of reports of *Phaonia* species are also listed, in addition to recently published records of the genus. The genus *Eginia* and its only species *Eginia ocypterata* (Meigen, 1826), six species of the genus *Helina* and one species of *Phaonia* are recorded for the first time for Bulgaria. The total number of species of the subfamily Phaoniinae reported from the country now reaches 88 species. The findings are collated and compared in tabular form with corresponding data from adjacent countries.

**Key words.** Bulgaria, Muscidae, Phaoniinae, new records, list of species

**Introduction**

Species of the subfamily Phaoniinae are worldwide in distribution, found in nearly every zoogeographical region. The numbers of species of the various genera listed by PAPE & THOMPSON in 2013 in *Systema Dipterorum* and large numbers of newly-described Phaoniinae-species added by other authors (e.g. COURI & PONT 2016, PONT 2012, SOROKINA 2015, XUE ET AL. 2014, XUE & SUN 2015, XUE & TIAN 2012, XUE & ZANG 2013, ZIELKE 2017a, 2017b) make a total of approximately 2,000 species, including synonyms. From the European part of the Palaearctic Region, 177 Phaoniinae species are listed as known from one or more countries (PONT, 2013). By far the most species-rich genera are *Phaonia* Robineau-Desvoidy, 1830 and *Helina* Robineau-Desvoidy, 1830, with 81 and 80 registered species respectively. Nine species constitute the genus *Atherigona* Rondani, 1856 and five make up *Lophosceles* Ringdahl, 1922. In Europe, the genera *Dichaetomyia* Malloch, 1921 and *Eginia* Robineau-Desvoidy, 1830 contain one species each. *Dichaetomyia* is well represented by numerous species in other parts of the world; *Eginia*, however, contains only the single species.

A considerable number of short reports and observations on the muscids from Bulgaria have been published since 1909, with the majority of papers appearing between 1950 and 1990. The first comprehensive overview of the Muscidae from Bulgaria was provided only in 2003 by LAVČIEV. This catalogue is based on earlier publications and on his own observations. It contains general information about the presence of Muscidae species in different areas of Bulgaria, their flight activities, e.g. seasons of the year, and height above sea level of collections. Unfortunately, more specific information, such as numbers, sex, localities and dates for the flies collected is sparse and, most regrettably,
no indication is provided as to where the specimens of the species named in the catalogue were deposited. Fortunately, the documentation does not merely list the species reported from Bulgaria, it also provides a comprehensive bibliography of earlier publications on the muscid fauna of the country. Hubenov (2016) recently published a comprehensive compilation of the Diptera recorded from the Rila Mountains in Bulgaria. As the publication concentrates on one area the country only, and as the information concerning Phaoniinae is based on the catalogue provided by Lavčev (2003) or older publications, the catalogue has been chosen as the base with which the results of the current investigations of the Phaoniinae from Bulgaria are compared.

The Muscidae in the collection of the Institute of Biodiversity and Ecosystem Research of the Bulgarian Academy of Sciences in Sofia, Bulgaria originate from a range of biotopes, primarily from Bulgaria, collected in the course of the last 110 years. The specimens are mounted on pins and stored either in boxes marked individually with a locality label, or assembled in smaller or larger clusters with one locality label per cluster. Most of these labels are handwritten in Cyrillic script. The overwhelming majority of the muscid specimens are not identified. Some specimens, however, have been labelled with a small piece of paper featuring a handwritten scientific name, but usually without reference to the identifier and lacking a date of identification.

More than a thousand specimens of the material examined proved to be members of the subfamily Phaoniinae. An update of the distribution records of the genus Phaonia in Bulgaria has already been published (ZIELKE 2016a). The current paper now reports primarily on findings regarding other genera of the subfamily, such as Atherigona, Eginia and Helina. Some additional new information on Phaonia is also presented. The genus Dichaeatomyia, which is only poorly represented in Europe, has yet to be detected in Bulgaria, and Lophosceles species have not been recorded from the country either. The update herein comprises a total of 48 species of the genera Atherigona, Eginia and Helina that have either been reported in the past or which are newly reported for Bulgaria. Forty species were identified from the material collected in the country between 1907 and 2017. Seven species and the genus Eginia Robineau-Desvoidy, 1830 are recorded for the first time for Bulgaria. In addition, two Phaonia species are included in the present compilation (Table 1) as they were not considered in an earlier, relatively recent, report on Phaonia (ZIELKE 2016a), and one of them is a new record for the country. The total number of species of the subfamily Phaoniinae reported from Bulgaria now rises from 80 to 88 species.

Material and methods

The investigations were conducted from April 2014 to October 2017 and were primarily based on the Muscidae collection held by the Institute of Biodiversity and Ecosystem Research, (IBER) of the Bulgarian Academy of Sciences, Sofia. The muscid specimens examined were captured between 1907 and 2017 by various collectors. Further, the Diptera collections of the National Museum of Natural History, Sofia (NMNHS) of the Bulgarian Academy of Sciences and of the Regional Natural History Museum of Plovdiv (RNMHP) were screened for specimens of Phaoniinae.
The majority of Phaoniinae-specimens were found among the large number of unidentified muscids in the three collections above. Identification of the flies relied largely on the key to the Muscidae of the Palaeartic Region by Hennig (1964) and the keys to the Muscidae of Central Europe published by Gregor et al. (2003, 2016). External morphological features of the specimens were examined using a Zeiss Stemi 2000-C stereomicroscope. All the specimens have been returned to the entomological collections from which they were loaned for investigation.

For the classification of the Muscidae and synonyms, this contribution follows Gregor et al. (2016). Genera and their species are listed alphabetically, and the sites of collection chronologically. The initials “V.L.” stand for the late Valentin Lavčiev, who collected the large majority of the muscid specimens in the collection of IBER. If specimens have been determined by persons other than the current author they are named under “det.”. The initials “A.I.” stand for one or more of the anonymous identifier(s) who marked several of the specimens of the collection of IBER prior to this investigation. Their provisional species labels are handwritten, but unfortunately do not name the identifier or supply the date of identification. As the overwhelming majority of these marked specimens were collected by Lavčiev, it is assumed that either Lavčiev himself or members of his team were responsible at least for a large part of this provisional labelling.

Details provided by Lavčiev (2003) on the localities of the species collected are commented upon and compared with present findings where pertinent. In the following “Results” section, these are referred simply to as “Lavčiev” without citing “2003”, the year of the publication of the Catalogue of the Bulgarian Muscidae.

**Results**

**Genus Atherigona Rondani, 1856**

*Atherigona varia* (Meigen, 1826)


**Genus Eginia Robineau-Desvoidy, 1830**

*Eginia ocypterata* (Meigen, 1826)

Material examined. 3 ♂ 1 ♀ Svilengrad, 8.5.1963, V.L. First record for Bulgaria.

**Genus Helina Robineau-Desvoidy, 1830**

*Helina allotalla* (Meigen, 1830)

Helina annosa (Zetterstedt, 1838)


Helina arctata Collin, 1953


Helina atricolor (Fallén,1825)

= Helina denudata, Zetterstedt, 1845


Helina ciliatocosta (Zetterstedt, 1845)


Helina cinerella (van der Wulp, 1867)

= Helina vanderwulpi Schnabl, 1888; = Helina tuleskovi Lavčiev, 1968

Material examined. 1 ♀ Rila Mts., springs of Maritsa River, 3.8.1935, P. Drenski; 3 ♀ Rodopi Mts., Perelik 9.8.1963, V.L.; 1 ♀ Rodopi Mts., x. Perelik, 9.5.1963, V.L., (this specimen is marked with a provisional label with the species name “Helina tuleskovi Lavčiev” in red handwriting); 2 ♀ Rodopi Mts., x. Perelik, 9.5.1963, V.L., (each female marked with a piece of paper, thinly framed with black ink and with the species name “Helina tuleskovi” in black handwriting only); 1 ♀ Rodopi Mts., x. Perelik, 9.5.1963, V.L., (marked with a provisional label which reads “w.p. wulpi” on the upper half and “tuleskovi?” in the lower half, both lines handwritten in pencil)

Remark. All specimens marked as H. tuleskovi proved to be H. cinerella.

Helina concolor (Czerny, 1900)


Remarks. Lavčiev listed a male from Sliven with the data as recorded above and also reported 1 ♀ from “near the town Montana” collected at 23.6.1964. As the village of
Burziya is located near to Montana, it cannot be excluded that Lavčiev reported the same female mentioned above in the Catalogue, particularly since both specimens were provisionally labelled as *H. concolor*. The difference regarding the collecting-date of the female from Montana might be due to a transcription error.

**Helina confinis** (Fallén, 1825)

*Helina anceps* Zetterstedt, 1838


Remarks. One female from Selishte, 24.8.1965 and the female from Priselci, 7.8.1971 were provisionally labelled as *H. parcepilosa*. Obviously the few setulae on the ventral side of the radial node were not considered.

**Helina dabovetsa** Zielke, 2017

Material examined. 6 ♂ (among the material: 1 ♂ holotype, 3 ♂ paratypes) Rodopi Mts., Dabovez, 18.6.1969, V.L.

**Helina decipiens** Mihályi, 1974


**Helina deleuta** (Stein, 1914)


**Helina depuncta** (Fallén, 1825)

Helina evecta (Harris, 1780)

= Helina laetifica Robineau-Desvoidy, 1830


Helina fratercula (Zetterstedt, 1845)


Helina impuncta (Fallén, 1825)


Remark. Lavèiev also listed, among others, a male collected near to the town of Momchilgrad, 27.6.1970 and further mentioned 2 ♀ from “Troyan Monastery”, but again giving collecting dates (15.6.1972) slightly deviating from the date (15.5.1972) written on the locality label. Only one of the two females mentioned by Lavèiev was found in the collection.

Helina intermedia (Villeneuve, 1899)


Helina lasiophthalma (Macquart, 1835)

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**Remark.** Lavèiev also listed a female from Sheshkingrad with the collecting dates as cited above.

*Helina latitarsis* Ringdahl, 1924


*Helina laxifrons* (Zetterstedt, 1860)


*Helina maculipennis* (Zetterstedt, 1845)

**Material examined.** 1 ♀ Stara Planina, Zheravna, 23.8.1969, V.L., det. A.I. First record for Bulgaria.

*Helina moedlingensis* (Schnabl, 1911)


**Remarks.** Although the ventral side of the radial node was covered with sparse setae and the ventral side of the scutellum was finely haired, one female from Yundola, 22.7.1965, and the female from Smolyan District, 31.7.1969, were marked as *H. parcepilosa* by provisional labels. The male from Stoykite, 26.7.1965, was assigned by temporary label to *H. confinis* in spite of its ventrally-haired scutellum.

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Helina monchili Zielke, 2016

Material examined. 1 ♂ (holotype) Rodopi Mts., Momchilgrad, 450m, 22.6.1970, V.L.

Helina montana (Rondani, 1866)


Helina obscurata (Meigen, 1826)


Remarks. One of the males collected near to Vezhen hut, 22.6.1972, was provisionally labelled as Helina latitarsis. The scar of the anterodorsal seta on the only mid-tibia was probably not recognized.

Helina parcepilosa (Stein, 1907)

= Helina calcataeformis Schnabl, 1911


Helina protuberans (Zetterstedt, 1845)

Material examined. 1 ♀ Rodopi Mts., Yundola, 23.8.1965, V.L. First record from Bulgaria.

Helina pubescens (Stein, 1893)


Remarks. One of the males collected near to Vezhen hut, 22.6.1972, was provisionally labelled as Helina latitarsis. The scar of the anterodorsal seta on the only mid-tibia was probably not recognized.
Helina pubiseta (Zetterstedt, 1845)

Material examined. 2 ♀ Rodopi Mts., Rakitovo, way up to Siatka peak, 41°53’20"N24°03’52"E, 17.08.2016, E. Zielke.

Helina quadrinotata (Meigen, 1826)


Remarks. Lavèiev reported 1 ♀ from Rhodopi Mts., near Stoykite village, collected at 25.6.1965. It cannot be excluded that this is identical with one of the two females mentioned above from Stoykite. Each specimen was already marked as H. quadrinotata with an individual, provisional label. However, only one female was mentioned by Lavèiev in the catalogue.

Helina quadrum (Fabricius, 1805)

Material examined. 1 ♀ Rodopi Mts., Mandritsa, 19.6.1969, V.L.

Helina reversio (Harris, 1780)

= Helina duplicata Meigen, 1826

Remarks. The females recorded from Bialata Voda, 22.5.1966, and from Smolyan, 23.6.1970, were both provisionally labelled *Helina parcepilosa*. However, the two specimens have short but distinct prealar setae, and the longest arista-hairs are barely as long as the width of postpedicel.

**Helina richardi** Pont, 2012

*Material examined.* 1 ♀ Stargach, Tower no. 4, 1,250 m, 15.6.1938, P. Drenski. **First record for Bulgaria.**

*Remarks.* This female was collected in 1938 in the Stargach Mountains in Bulgaria, close to the border with Greece. Although the locality and adjacent areas were investigated several times before and after 1938, no other similar specimens were found. Probably due to the fact that the fly was not examined after collecting, it was not noticed that the radial node of this *Helina* species is haired not only ventrally but also dorsally, and that therefore the specimen constituted a new species. Only in 2012 was the species described by Pont as *Helina richardi*, based on type material of approx. 60 specimens from Morocco collected between 1952 and 1963, 20 males and females from Spain collected between 1963 and 2001 and one female from Greece collected in 1982. *H. richardi* appears to be quite common in certain biotopes in Morocco and Spain but is obviously rare in Bulgaria.

**Helina rilae** Zielke, 2017

*Material examined.* 1 ♂ (holotype) Cemkovo, 1,800 m, 16.6.1968, V.L.

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*Helina sexmaculata* (Preyssler, 1791)

$\approx$ *Helina punctata* Robineau-Desvoidy, 1830

**Material examined.** 1 ♀ Sofia, 20.5.1934, P. Drenski, det. A.I.; 1 ♂ W. Stara Planina, Bialata Voda, 22.5.1966, V.L., det. A.I.

*Helina siutkae* Zielke, 2017

**Material examined.** 1 ♂ (holotype) Rodopi, x. Siutka, 14.8.1963, V.L.

*Helina subvittata* (Séguy, 1923)$\approx$ *Helina rothi* Ringdahl, 1939


**Remarks.** The female from Tchehlevo mentioned above is also listed by Lavèiev from “Chehliovo” with identical collecting dates.

*Helina syracusana* Hennig, 1957

**Material examined.** 1 ♀ Er. Kiupria, 11.5.1963, V.L.; 1♂ 2 ♀ Rodopi Mts., Perelik, 9.8.1963, V.L., det. A.I.; 1 ♀ Petrochian, 4.8.1964, V.L. The species is not listed in *Fauna Europaea* (PONT 2013), however, it is considered as a valid species by *Systema Dipterorum* (PAPE & THOMPSON 2013) and the current version of Catalogue of Life (ROSKOV et al. 2018). Therefore the species is also here considered as good. **First record for Bulgaria.**

*Helina tetrastigma* (Meigen, 1826)$\approx$ *Helina flagripes* Rondani, 1866


**Species of Helina previously reported from Bulgaria**

The following species were recorded by LAVČIEV (2003) in *Catalogus Faunae Bulgaricae* (= CFB) and the majority of the species is also assigned to Bulgaria in *Fauna Europaea* (PONT 2013) (= FE), but no specimens were found in any of the three collections screened for Phaoniinae.

*Helina cilipes* (Schnabl, 1902)

**Remarks.** Lavčiev listed a total of 10 specimens, with the following collecting data: Stara planina Mts., village Zheravna, 23.7.1963, 1 ♂ and 3 ♀; Rhodopes Mts., village
Stoykite (Smolyan), 26.7.1965, 1 ♀ and village Selishte (Smolyan) at 27.5.1969 4 ♂ and 26.7.1969 1 ♂.

Among the material examined, five specimens originating from Zheravna and Selishte were detected, each one marked with a provisional label as *H. cilipes*. However, all five specimens proved to be *Helina confinis*; none of them belonged to *H. cilipes*. The species is also recorded from Bulgaria in FE.

*Helina interfusa* (Pandellé, 1899)

**Remarks.** 1 ♂ is listed in the CFB from western Stara Planina, near the town of Vidin, collected 20.9.1964. However Zielke & Bašar (2018) report that the specimen was discovered at the Natural History Museum in London and proved to be a female of *Helina pubescens*. The species is also recorded for Bulgaria in FE.

*Helina obscuratoides* (Schnabl, 1887)

**Remarks.** 2 ♀ from western Stara Planina, Sv. Nikola pass, 5.8.1963, were recorded in CFB. The species is not listed for Bulgaria in FE.

*Helina obtusipennis* (Fallén, 1823)

**Remarks.** Four localities for this species were specified in CFB: “Stara planina Mts. – near village Zheravna (Sliven), 23.8.1969, 1 ♀; Rhodopes Mts. – on the foot of Peak Siutkia, 14.07.1963, 2 ♀, 1 ♂; near Smolyan, 25.06.1965, 1 ♀; near hut Studenets (Smolyan), 27.07.1969, 3 ♂”. The species is also mentioned from Bulgaria in FE.

*Helina pandellei* (Villeneuve, 1922)

**Remarks.** 2 ♂ and 1 ♀ of the species were reported in CFB from the western Rhodopes Mts., near the village of Zaburdo (Smolyan), 25.5.1973. The species is also listed for Bulgaria in FE.

*Helina setiventris* Ringdahl, 1924

**Remarks.** The species is recorded in CFB from the western Rhodopes Mts., at the foot of peak Siutkia, 14.7.1963, 1 ♂ and 1 ♀; from Stara Planina Mts., near Vidin 1 ♀ , without specification of time of collection, and from Kokalane (Sofia) from 3.8.1963. The species is also noted for Bulgaria in FE.

*Helina spinicosta* (Zetterstedt, 1845)

**Remarks.** Without collection details, the species is mentioned in CFB from Stara Planina Mts., Shastingrad (Sliven) and from western Rhodopes near Smolyan.
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One female, provisionally labelled as “Hel. spinicosta” and collected on 24.8.1965 in Selishte, which is close to Smolyan, was found in the collection and could be one of the specimens mentioned by Lavčiev. However, this female, with some weak setae on the ventral side of the radial node of the wing and sparse setulae on the ventral surface of the scutellum, proved to be Helina moedlingensis. H. spinicosta is not listed for Bulgaria in FE.

Helina trivittata (Zetterstedt, 1860)

= Helina atripes Meade, 1889

Remarks. According to CFB, three specimens were collected in Bulgaria, 1 ♂ in Western Stara Planina Mts., near Belogradchik, 4.7.63; 1 ♂ and 1 ♀ in the western Rhodopes Mts. on 24.7.1965 and 26.7.1965 respectively. The species is also mentioned for Bulgaria in FE.

Helina tuleskovi Lavčiev, 1968

= synonym of Helina cinerella (van der Wulp, 1867)

Remarks. Although PONT (1986) reported that this species was synonymized with H. cinerella (van der Wulp, 1867), Lavčiev listed H. tuleskovi as still valid in CFB, from the locality: “Northern slope of Mt. Golyam Perelik, Rhodopes planina Mts., 9.08.1963, 3 ♂ and 2 ♀.” Four specimens (2 ♂ 2 ♀) provisionally labelled as H. tuleskovi were found in the IBER collection. Although the flies were collected on the same day at the type locality they were not marked as type-material. According to the description of the species (LAVČIEV 1968), H. tuleskovi is primarily distinguished from H. cinerella by the latter’s postpedicel, which is only twice as long as wide, and by short ventral arista-hairs, which appear in the figure with the description (Lavčiev 1968) as not much longer than the basal diameter of the arista. None of the specimens labelled as H. tuleskovi matched these specific indications and they were accordingly assigned to the earlier synonymization to H. cinerella.

Genus Phaonia Robineau-Desvoidy, 1830

The following findings of Phaonia-species are listed as an addition to the recently-published distribution records of Phaonia from Bulgaria (ZIELKE 2016a). With the exception of P. profugax and P. sandanskii, all other Phaonia-species mentioned below have already been considered in the earlier update, and therefore are not included in Table 1 below. The additional data presented here amend existing knowledge of the distribution of the species in Bulgaria.

Phaonia angelicae (Scopoli, 1763)

E. Zielke

*Phaonia errans* (Meigen, 1826)

Material examined. 1 ♀ Shumen District, near to hut Bukasite, 16.6.1976, V.L.

*Phaonia mediterranea* Hennig, 1963

Material examined. 1 ♀ Stara Planina, Chuprene, 18.7.2014, P. Mitov.

*Phaonia meigeni* Pont, 1986

(= *Phaonia lugubris* auct. nec Meigen, 1826)

Material examined. 1 ♀ Vitosha Mts., 1,300–1,400 m, 4.6.1950, P. Drenski.

*Phaonia pallida* (Fabricius, 1787)


*Phaonia palpata* (Stein, 1897)


*Phaonia perdita* (Meigen, 1830)


*Phaonia pratensis* (Robineau-Desvoidy, 1830)

Material examined. 1 ♂ Zlatograd, 6.8.1963, V.L.

*Phaonia profugax* (Pandellé, 1899)


Remarks. The specimen had been provisionally labelled by an anonymous identifier as *Helina depuncta*. The presence of the main character for the differentiation between the two genera *Phaonia* and *Helina*, the long postero-dorsal seta on the distal third of the hind-tibia, was not considered in the identification and without this character the other characteristics of the specimen may lead to *Helina depuncta*.

*Phaonia regalis* (Stein, 1900)

Material examined. 2 ♀ Rodopi Mts., Ivailovgrad, 20.6.1969, V.L.
Phaonia sandanskii Zielke, 2017
Material examined. 1 ♀ (holotype) Sandanski, 3.11.1965, V.L.

Phaonia scutellata (Zetterstedt, 1845)
Material examined. 1 ♀ Stara Planina, Chuprene, 13.6.–18.7.2014, P. Mitov.

Phaonia serva (Meigen, 1826)

Phaonia subventa (Harris, 1780)

Phaonia tiefii (Schnabl, 1888)
Material examined. 1 ♀ Rila Mts., x. Musula, 29.7.1936, P. Drenski.

Phaonia trimaculata (Bouché, 1834)

Phaonia tuguriorum (Scopoli, 1763)

Phaonia valida (Harris, 1780)

Phaonia zugmayeriae (Schnabl, 188)
Material examined. 1 ♀ Rila Mts., Maljovitsa hut, 17.8.1962, V.L.
Discussion

The chapter “Muscidae” (Pont 1986) in the “Catalogue of Palaearctic Diptera” indicates that 55 species of the subfamily Phaoniinae were known from Bulgaria at the time of publication. The number of Phaoniinae-species has been supplemented by two further species in “Fauna Europaea” (Pont 2013). Lavèiev (2003) summarized the findings of Muscidae in Bulgaria and reported a total of 66 species of the subfamily Phaoniinae. The current investigation on the distribution of Phaoniinae species in Bulgaria revealed a total of 88 species, of which 71 were found among the material collected in the last 110 years in the country, while 17 species have been included in the compilation as they have been reported in literature as known from Bulgaria. Eight of the species identified are new records for the country. Six Helina species recorded by Pont (2013) and by Lavèiev (2003) and two other Helina species listed for Bulgaria only by Lavèiev were not found among the material studied. Regarding the genus Phaonia (Zielke 2016a), three species listed by Pont and by Lavèiev, five species listed only by Lavèiev and one species mentioned only by Pont respectively were not identified in the collections when they were screened for Phaoniinae. From the total of 88 Phaoniinae-species reported from Bulgaria by Lavèiev (2003), Pont (2013), Zielke (2016a, 2016b, 2017b) and by the current update, 46 species belong to the genus Helina, 40 to Phaonia and one each to Atherigona and Eginia.

Records of species of the genus Phaonia from the countries neighbouring Bulgaria have recently been addressed (Zielke 2016a). The distribution of the species of the remaining genera, such as Atherigona, Eginia, Helina and Lophosceles, in the adjacent countries of Greece, Romania, and Serbia is presented for comparison in Table 1, based on the data provided by the latest version of Fauna Europaea (Pont 2013). The knowledge of Phaoniinae species from Macedonia and the European part of Turkey – both countries also sharing a border with Bulgaria – is very poor. Only Atherigona varia and Helina reversio have been recorded from Macedonia and no reports were found for the European part of Turkey (Pont 2013). Of the eight species newly recorded for Bulgaria, seven were already known from at least one of the neighbouring countries. Only Helina syracusana has not yet been reported from the adjacent countries. This is also true of H. obscuratoides and H. spinicosta, which were reported from Bulgaria only by Lavèiev (2003) but not by Pont (2013). While the IBER collection contains male and females of H. syracusana, to date no specimens of H. obscuratoides have been disclosed among the material investigated and the only female specimen marked with a provisional label as “Hel. spinicosta” proved to be a wrongly identified H. moedlingensis.

Among the material studied, Helina reversio was the most common species, with 206 specimens, collected on 98 different days and in 67 different localities, followed by Helina obscurata, with 104 flies captured on 33 different dates and in 20 different

Table 1. Species of the genera Atherigona, Eginia, Helina and Lophosceles reported from Bulgaria (BG), Greece (GR), Romania (RO) and Serbia (S) in comparison with the current findings. (LAV = Lavèiev 2003; PONT = Pont 2013; BG 2017 = current update). With the exception of P. profugas and P. sandanski, the findings of Phaonia-species reported from Bulgaria have already been discussed in an earlier contribution (Zielke 2016a). (Continued.) →
### Distribution of Phaoniinae in Bulgaria

<table>
<thead>
<tr>
<th>No</th>
<th>Genera and species</th>
<th>BG 2017</th>
<th>BG LAV</th>
<th>BG PONT</th>
<th>GR PONT</th>
<th>R PONT</th>
<th>S PONT</th>
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<tbody>
<tr>
<td>1</td>
<td>Atherigona soccata Rondani, 1871</td>
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<td>Eginia ocypterata (Meigen, 1826)</td>
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<td>Helina abdominalis (Zetterstedt, 1846)</td>
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<td>Helina allotalla (Meigen, 1830)</td>
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</tr>
<tr>
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localities. More than 20 specimens of Helina evecta (53 specimens/36 different days/33
different localities), Helina latitarsis (40/27/21), Helina confinis (40/17/15), Helina
moedlingensis (29/16/15), and Helina annosa (24/16/16) were also found. Of all the other
listed species, considerably fewer specimens were identified. Six species were only
represented by one specimen, although many collecting efforts have been conducted in
Bulgaria over a period of more than a century in a variety of biotopes.

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and transcription of the many locality labels that were handwritten in Cyrillic script. I
also would like thank Dr. Mario Longourov from the National Museum of Natural
History, Sofia and Dr. Ognyan Todoro, Head of the Regional Natural History Museum of
Plovdiv, for access to the Diptera collections of these museums. I am also very grateful
to Prof. Plamen Mitov (Faculty of Biology, Sofia University “St. Kliment Ohridski”) for
providing me with muscid specimens. I also thank Tony Long (Svinošice) for working up
the English.
Distribution of Phaoniinae in Bulgaria

References


PONT A. C. 2012: Distribution records of Helina Robineau-Desvoidy, 1830 (Diptera: Muscidae) from the Caucasus Mountains, with the descriptions of three new species. Zootaxa 3409: 30–46.


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