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A contribution to the sawfly fauna of northern Greece (Hymenoptera, Symphyta)

With one figure

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Abstract

This contribution to the Greek sawfly fauna reports on 41 species of *Symphyta* from Macedonia and Epirus. Nineteen of them are recorded from Greece probably for the first time: *Aprosthem a austriaca* (KONOW, 1892), *Strongylogaster xanthocera* STEPHENS, 1835, *Scolioneura spec.*, *Athalia cornubiae* BENSON, 1931, *A. paradoxa* KONOW, 1886, *Monostegia abdominalis* (FABRICIUS, 1798), *Allantus cingulatus* (SCOPOLI, 1763), *Tenthredo brevicornis* (KONOW, 1886), *T. livida* LINNAEUS, 1758, *T. maculata semseyi* MOCSÁRY, 1883, *T. marginella marginella* FABRICIUS, 1793, *T. notha notha* KLUG, 1817, *T. obsoleta* KLUG, 1817, *T. amoena* GRAVENHORST, 1807, *Rhogogaster viridis* (LINNAEUS, 1758), *Macrophya rufipes orientalis* MOCSÁRY, 1891, *M. rufopicta* ENSLIN, 1910, *Aglaostigma aucupariae aucupariae* (KLUG, 1817), *Pontania kriechbaumeri* (KONOW, 1901). The Lectotype of *Empria abdominalis* var. *rufinotis* ENSLIN, 1914 (= *Monostegia abdominalis* FABRICIUS, 1793) is fixed.

Zusammenfassung

Der vorliegende Beitrag zur griechischen Blattwespenfauna berichtet über 41 Blattwespenarten aus Makedonien und Epirus, von denen 19 wahrscheinlich erstmals in Griechenland nachgewiesen werden: *Aprosthem a austriaca* (KONOW, 1892), *Strongylogaster xanthocera* STEPHENS, 1835, *Scolioneura spec.*, *Athalia cornubiae* BENSON, 1931, *A. paradoxa* KONOW, 1886, *Monostegia abdominalis* (FABRICIUS, 1798), *Allantus cingulatus* (SCOPOLI, 1763), *Tenthredo brevicornis* (KONOW, 1886), *T. livida* LINNAEUS, 1758, *T. maculata semseyi* MOCSÁRY, 1883, *T. marginella marginella* FABRICIUS, 1793, *T. notha notha* KLUG, 1817, *T. obsoleta* KLUG, 1817, *T. amoena* GRAVENHORST, 1807, *Rhogogaster viridis* (LINNAEUS, 1758), *Macrophya rufipes orientalis* MOCSÁRY, 1891, *M. rufopicta* ENSLIN, 1910, *Aglaostigma aucupariae aucupariae* (KLUG, 1817), *Pontania kriechbaumeri* (KONOW, 1901). Der Lectotypus von *Empria abdominalis* var. *rufinotis* ENSLIN, 1914 (= *Monostegia abdominalis* FABRICIUS, 1793) wird festgelegt.

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During past few years I have traveled to Greece three times in midsummer and once in spring. I collected sawflies on Mount Olympus, on the Holy Mountain Athos, and in the Rhodopian Mountains near the Bulgarian border (all in the province of Macedonia), in the Vikos Gorge and the Timfi massif in the northeast of Ioannina (province of Epirus). Additionally this paper considers material which is preserved at the Zoologische Staatssammlung in Munich and material that has been collected by Dr. H. MÜHLE (Pfaffenhofen a. d. Glonn, Germany) and K. WITZGALL (Dachau, Germany).

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According to the literature examined 19 of the 41 collected sawfly species are new to the Greek fauna. In the following list these species are marked by an asterisk "*". One not precisely determined species of the genus *Scolioneura* and galls of *Pontania kriechebaumeri* (KONOW, 1901) belong to this category, too.

33 of the 41 enumerated species occur also in Central Europe. Only two of the 19 (sub-)species that are recorded from Greece for the first time are not known from Central Europe: *Macrophya rufopicta* ENSLIN, 1910 and *M. rufipes orientalis* MOCSÁRY, 1891. The majority of material treated in this publication has been collected at more than 1.000 m above sea level. In Greece those sawfly species which are distributed also in Central Europe do mostly occur at a greater altitude. The entomologists of earlier times have mostly investigated the lowlands of Greece, to capture species that are typically mediterranean. Thus within a short period of collecting in the Greek mountains quite an extensive number of first records to the local fauna resulted.

HORVAT, GLAVAČ and ELLENBERG (1974) have characterized the flora of the Greek mountains as a Central European one. The probability that phytophagous insects follow their host plants within their distribution area seems to be correspondingly high.

Extensive study of the sawfly fauna of the southern Yugoslavia has been done by ČINGOVSKI (1956-1985, mostly concerning Yugoslavian Macedonia). Several reports about the local sawfly fauna have been published by HELLÉN (1967), KÖNIGSMANN (1971) and ZOMBORI (1974 and 1984). SCOBIOALA-PALADE (1978) and VASILEV (1978) have written faunistic works for Romania and Bulgaria.

List of species

Xyelidae

Xyela graeca STEIN, 1876

Olympus massif: Agios Ioannis (800 m NN) 2♂ and Lithochoron (500 m NN) 1♀, 21.4.87.

The two male specimens were caught when swarming around shrubs of *Pinus nigra* and *Juniperus oxycedrus*.

Siricidae

Urocerus gigas gigas (LINNAEUS, 1758)

Rhodopian massif: Mt. Sara SE 2 km (1400 m NN), 18.-20.8.89, 2♀.

The two female woodwasps were caught flying along the edge of a pine wood about noon. One female could be observed laying eggs into the lower side of a gnarled branch of Black Pine (*Pinus nigra*), which measured about 20 cm in diameter. The top of the tree was dead. This single observation confirms an investigation of ASS and FUNTIKOW (1932), according to whom eggs are laid in dry, dead or weak trees.

Megalodontidae

Megalodontes speciosus (MOCSÁRY, 1877)

Timfi massif: Vikos Gorge (500 m NN), 2.7.86, 1♀ visiting flowers of white ox-eye (*Leucanthemum spec.*), Vikos Gorge (1700 m NN), 5.7.86, 4♀ 5♂.

In accordance with TAEGER, who determined these specimens, *M. speciosus* is distributed in Bosnia and Greece. ČINGOVSKI (1980) has published records of *M. flabellicornis* (GERMAR, 1817), *M. flavicornis* (KLUG, 1824) und *M. kohli* (KONOW, 1897) from Yugoslavian Macedonia.

Cephidae

Trachelus troglodyta (FABRICIUS, 1787)

Olympus massif: Mt. Ossa, 23.5.-2.6.1988, 1♂, leg. MÜHLE.

This species is already known from Greece (HELLÉN 1967). *T. troglodyta* is the most common species of the *Cephidae* throughout the mediterranean area (SCHEDL in litt.).

Argidae

**Aprosthem a austriaca* (KONOW, 1892)

Timfi massif: Papington O (1400 m NN), 4.7.86 1♂.

CONDE (1934) assumes that *A. austriaca* is just a form of *A. melanura* (KLUG, 1812), which still hasn't been found in Greece yet.

Arge frivaldszkyi (TISCHBEIN, 1852)

Olympus massif: Lithochoron (600 m NN), 28.7.85 1♂.

ČINGOVSKI (1982) treated *A. frivaldszkyi* as a very seldom species from Yugoslavian Macedonia.

Arge ochropus (GMELIN, 1790)

Timfi massif: Vikos-Schlucht (1700 m NN), 5.7.86 1♀, visiting the flower of a white *Apiaceae*.

Arge cyanocrocea (FÖRSTER, 1771)

Athos peninsula: Karakalou (600 m NN), 24.4.87 3♀ 1♂, feeding on the flowers of various species of *Euphorbia*.

Cimbicidae

Corynis lateralis (BRULLÉ, 1832)

Olympus massif: Balkoni N (1900 m NN), 31.7.85 1♂; Gomarostali (1850 m NN), 7.7.86 1♂; Mandres (1400 m NN), 8.6.86 4♀ 1♂. Most of the specimens have been caught visiting the flowers of *Sedum sartorianum*.

Corynis obscura (FABRICIUS, 1775)

Olympus massif: Mandres (1400 m NN), 8.6.86 2♀ 2♂, sleeping in flowers of *Geranium* spec. during misty weather.

LISTON (1985) reported about this species from Evritania, Mount Timfristos.

Tenthredinidae

**Strongylogaster xanthocera* STEPHENS, 1835

Athos peninsula: Karakalou (600 m NN), 26.4.87 1♀ 1♂ visiting flowers of *Euphorbia* spec., one further ♀ at the same locality on the flowers of a violet *Brassicaceae*, in a rivulet pasture.

The caught females are well separable from *S. lineata lineata* (CHRIST, 1791), which has a deeply incised hypopygium (cf. Zombori 1979). This species is new to the Greek fauna but known from Yugoslavian Macedonia (HELLÉN 1967).

**Scolioneura* spec.

Rhodian massif: Mt. Sara SE 2 km (1400 m NN), 18.-20.8.89 1♂, caught in the vegetation of a moist meadow.

The specimen can neither be attributed to *S. betuleti* (KLUG, 1816), nor to *S. hyrcana* BENSON, 1968. The single sawfly might resemble the male of *S. tirolensis* (ENSLIN, 1914) (KOCH 1992, pers. comm.) which is not yet known to science. No species of *Scolioneura* has been found in Greece till now.

Athalia cordata LEPELETIER, 1823

Olympus massif: Agios Ioannis near Lithochoron (800 m NN), 21.4.87 2♀ 7♂, swarming above *Ajuga reptans*.

A. cordata has been recorded from Crete (SCHEDL 1981) and from Cyprus (SCHEDL and KRAUS 1989). Now the species has been found in continental Greece for the first time.

**Athalia cornubiae* BENSON, 1931

Olympus massif: Zonaria (2300 m NN), 29.7.85 1♀.

The species is known from Yugoslavian Macedonia (ČINGOVSKI 1982, ZOMBORI 1974).

**Athalia paradoxa* KONOW, 1886

KONOW, F. W. - 1886. Dtsch. ent. Ztschr. 30: 78-79, ♀, locus typicus: Schweiz, Goeschenen.

Holotype 1♀: [round, bordered red:] "Type H. T."; "coll. KONOW"; "Goeschenen 1.7.[18]84 FRIESE [leg.]"; "*Athalia paradoxa* n. sp. Helvet."; "*Athalia paradoxa* KONOW ♀ det. BLANK".

The holotype is deposited in the collection of the Deutsches Entomologisches Institut (DEI, Eberswalde-Finow). The type specimen is in a good condition, except that tibia and tarsus of the left fore leg is missing. This specimen has been labelled as the holotype by BENSON.

Olympus massif: Balkoni N, Agios Ioannis, Skala, Zonaria (1900-2500 m NN), 29.7.-2.8.85 7♀ 8♂.

This montane species is distributed over the European highlands and Macedonia (BENSON 1962; ČINGOVSKI 1967, 1972 and 1980; LISTON 1980), France (CHEVIN 1977 and 1984), Hungary and Italy (ZOMBORI 1981 and 1984), Greece (Olympus) and Turkey (BENSON 1968) (Fig. 1). Recently SCHEDL has found *A. paradoxa* in Austria (Nordtirol, Ötztaler Alpen, Obergurgl, 2000 m NN, 2.7.86, 1♀ 1♂, leg. M. SCHWARZ, det. W. SCHEDL 1987; pers. comm.). Only once has *A. paradoxa* been found in the lowlands (Turkey: Iznik near Bursa, 50 m NN; BENSON 1968, GUICHARD and HARVEY 1967).

On Mount Olympus *A. paradoxa* could mostly be found in the - only few centimetre high - vegetation of the "snow-bed meadows" (STRID 1980) [*Alopecurus gerardii*-*Gnaphalium hoppeanum*-Ass. QUÉZEL 1967; HORVAT, GLAVAČ and ELLENBERG 1974]. On Mount Olympus *Sedum atratum* L. ssp. *carinthiacum* (HOPPE ex PASCHER) D.A. WEBB (*Crassulaceae*) or *Thlaspi rivale* J. et C. PRESL (*Brassicaceae*) come into question as host plants of this sawfly.

**Monostegia abdominalis* (FABRICIUS, 1798)

Synonym: *Empria abdominalis* var. *rufinotis* ENSLIN, 1914. Dtsch. ent. Ztschr., Berlin 1914 (Beiheft 3): 212, ♀, locus typicus: Deutschland, Bonn.

Lectotype ♀ (by present designation): [red:] "Type"; "Bonn"; "Sammlung Dr. ENSLIN"; "*Empria abdominalis* v. *rufinotis* ENSLIN"; [red:] "Lectotypus ♀ *Empria abdominalis* var. *rufinotis* ENSLIN 1914 des. S. BLANK 1990"; "*Monostegia abdominalis* F. ♀ det. S. BLANK 90".

The lectotype is located in the Zoologische Staatssammlung (Munich). It is in good condition. The saw is mounted on a small piece of cardboard, kept on the needle of the lectotype.

ENSLIN described the lightest color form of *M. abdominalis* as the variety *rufinotis*. However the coloration of the species is quite variable. The saw of the lectotype does not differ from that of darker colored specimens. The synonymy proposed by SMITH (1979) and TAEGER (1987) can be confirmed. Describing this new variety ENSLIN did not give any information concerning number and origin of his type(s). The only specimen in the collection of the Zoologische Staatssammlung which is labelled as "Type" and which agrees with the description of ENSLIN is fixed as lectotype.

In the Zoologische Staatssammlung there is a further, even lighter variation of *M. abdominalis* called "*Empria abdominalis* v. *rufoscutellata* E. ♀" by ENSLIN and labelled as "Type", too. This specimen is from the same locality as the variety *rufinotis* ENSLIN 1914. The name "*rufoscutellata* ENSLIN" is a nomen in litteris, because a description is missing.

Olympus massif: Mt. Ossa, 23.5.-2.6.1988 1♀, leg. H. MÜHLE.

M. abdominalis is well separable from *M. nigra* (KONOW, 1896) by coloration and the shallow teeth of the saw (CONDE 1940, TAEGER 1987). The latter has been reported from Greece as *M. cingulata* (KONOW, 1891) by LISTON (1985). ČINGOVSKI (1982) reported *M. abdominalis* as a quite frequent species from Yugoslavian Macedonia.

Ametastegia carpini (HARTIG, 1837)

Olympus massif: Enipefs valley (1600-2000 m NN), upper woody region, 13.-31.7.57 1♀, leg. F. DANIEL.

A. carpini has been reported from the neighbouring countries Turkey and Bulgaria (BENSON 1968, HELLEN 1967) just as from Greece (LISTON 1983).

**Allantus cingulatus* (SCOPOLI, 1763)

Athos peninsula: Megisti Lavra (150 m NN), 27.4.87 1♂.

This eurosibirian species was not previously known from Yugoslavian Macedonia and Greece. VASSILEV (1978) lists *A. cingulatus* in his "Fauna Bulgaria".

Allantus didymus (KLUG, 1818)

Olympus massif: Mandres (1400 m NN), 8.7.86 1♀.

Both SCHEDL (1981; Crete) and LISTON (1985; Fokis, Giona Oros) report *A. didymus* to be a member of the Greek sawfly fauna. This species is known from southern Yugoslavia by ČINGOVSKI (1956, 1967 and 1982), KÖNIGSMANN (1971) and ZOMBORI (1974).

Tenthredo bifasciata bifasciata MÜLLER, 1766

Timfi massif: Mikro Papington (1200 m NN), 4.7.86 1♀.

**Tenthredo brevicornis* (KONOW, 1886)Synonyms: *T. nitidior* (KONOW, 1888), *T. acerrima* BENSON, 1940.Timfi massif: Vikos Gorge (1700 m NN), 5.7.86 11♀ 7♂; Papington E (1400 m NN), 4.7.87 5♀ 6♂. Several of the specimens collected had visited the white flowers of an *Apiaceae*.

Probably *T. brevicornis* and *T. arcuata* FORSTER, 1771 from Greece have been mixed up by previous authors. The latter has not been listed for the Greek fauna by HELLÉN (1967).

The safe determination of male specimens of the *Tenthredo-arcuata-schaefferi* group is still difficult, because the species-specific characters are both slight and highly variable. Besides the characters published by TAEGER (1988) the dorsal sides of the abdominal terga, which have a strikingly different pale colouration, may be criterion.

**Tenthredo livida* LINNAEUS, 1758

Olympus massif: Mandres (1400 m NN), 8.7.86 1♀.

The single female has a black abdomen (var. *dubia* STRÖM, 1768). The mesepisternum and the lateral part of the first abdominal tergite are white.

ČINGOVSKI (1985) knew the species from Yugoslavian Macedonia.

**Tenthredo maculata semseyi* (MOCSÁRY, 1883)

Olympus massif: Gomarostali (1850 m NN), 7.7.86 1♀.

This subspecies is distributed from CSFR (Moravia and Slovakia, BENEŠ 1989), Hungary and Austria (BENSON 1968), Yugoslavian Macedonia and southern Serbia (ČINGOVSKI 1958 and 1967, HELLÉN 1967), Bulgaria and Rumania (TAEGER pers. comm.) as far as Greece.

**Tenthredo marginella marginella* FABRICIUS, 1793Olympus massif: Prionia (1300 m NN), 28.7.85, 1♀ visiting flowers of white ox-eye (*Leucanthemum* spec.).

This species is known from the adjoining countries Yugoslavia, Bulgaria und Turkey (TAEGER 1988).

Tenthredo jelochovcevi VASSILEV, 1971(=*T. neobesa* ZOMBORI, 1980, sensu TAEGER 1984)

Timfi massif: Vikos Gorge (1700 m NN), 5.7.86 1♀ 4♂; Papington E (1400 m NN), 4.7.86 1♀.

In Greece this species was collected for the first time by MUCHE (TAEGER 1984; Pangaeon).

**Tenthredo notha notha* KLUG, 1817Rhodopian massif: Mt. Sara SE 2 km (1400 m NN), 18.-20.8.89 7♀ 5♂. Most specimens were collected from the flowers *Apiaceae*.

(vid. *T. brevicornis*!).

**Tenthredo obsoleta* KLUG, 1817

Rhodopian massif: Mt. Sara SE 2 km (1400 m NN), 18.-20.8.89 1♀.

HELLÉN (1967) did not list this species in the Albanian, in the Yugoslavian or the Greek fauna. *T. mesomela* LINNAEUS, 1758 is the only member of this species complex that has been found in Yugoslavian Macedonia (ČINGOVSKI 1985).

T. obsoleta is distributed from northern to subalpine Europe (BENSON 1952) as far as the Baikal region (VERZHUTSKY 1966). In the eastern Alps this species has been found up to an altitude of 2250

m (SCHEDL 1976). Places of discovery in Rumania and Bulgarian Macedonia have been published by SCOBIOLOA-PALADE (1978) and TAEGER (1987).

In the Rhodopian Mountains *T. obsoleta* has been found the farthest south ever.

Tenthredo scrophulariae LINNÉ, 1758

Olympus massif: Balkoni N (1900 m NN), 31.7.85 1♂.

Tenthredo zonula KLUG, 1817

Timfi massif: Papington O (1400 m NN), 4.7.86 2♀ 2♂ visiting flowers of *Apiaceae*.

T. zonula is known from Greece (LISTON 1983, 1985).

**Tenthredo amoena* GRAVENHORST, 1807

Timfi massif: Vikos Gorge (1700 m NN), 5.7.86 2♂.

In the Balkans *T. amoena* has hitherto only been known from Bulgaria, Albania and Yugoslavian Macedonia (HELLÉN 1967).

**Rhogogaster viridis* (LINNÉ, 1758)

Timfi massif: Vikos Gorge (1700 m NN), 5.7.86 2♀.

This species, which is new to the Greek Fauna, has been found in Yugoslavian Macedonia several times (ČINGOVSKI 1956, 1967 and 1972).

Macrophya annulata (GEOFFROY, 1785)

Timfi massif: Vikos Gorge (1700 m NN), 5.7.86 1♂.

Macrophya diversipes (SCHRANK, 1782)

Timfi massif: Vikos Gorge (1700 m NN), 5.7.86 3♀.

Macrophya postica (BRULLÉ, 1832)

Athos peninsula: Karakalou (600 m NN), 26.4.87 1♀ visiting flowers of *Euphorbia* spec.

**Macrophya rufipes orientalis* MOCSÁRY, 1891

Timfi massif: Vikos Gorge (1700 m NN), 5.7.86 1♀ visiting flowers of *Apiaceae*.

Macrophya rufipes has been reported from Yugoslavian Macedonia (ČINGOVSKI 1956 and 1972, KÖNIGSMANN 1971), Montenegro and Kosovo (ZOMBORI 1974) and from Bulgaria (HELLÉN 1967).

**Macrophya rufopicta* ENSLIN, 1910

Timfi massif: Vikos Gorge (1700 m NN), 5.7.86 1♀.

Hitherto *M. rufopicta* has only seldomly been found in northern Italy and northern Yugoslavia (PESARINI and PESARINI 1980, SCHEDL 1985, PESARINI 1991). This record in the Rhodopian Mountains represents the most southerly place of discovery, widely separated from the previously known distribution area. The single female was collected at an altitude of 1700 m height above sea level, 900 m higher than known in the literature.

Macrophya superba TISCHBEIN, 1852

Timfi massif: Vikos Gorge (1700 m NN), 5.7.86 2♀.

**Aglaostigma aucupariae aucupariae* (KLUG, 1817)

Athos peninsula: Karies (500 m NN), 24.4.87 1♂.

A. aucuparia is known from Yugoslavian Macedonia and Serbia (ZOMBORI 1974, ČINGOVSKI 1976). BENSON (1968) has described *Aglaostigma aucuparia* ssp. *lacteore* from Turkey. This subspecies is characterised by the yellow-white marked lower face of male specimens. The collection of the Zoologische Staatssammlung, Munich, contains an "*Aglaostigma aucupariae* var. *albofasciata* n. var., det. ZIRNGIEBL" (Transkaukasus, KOKUJEV leg., 1♂). BENSON's description of *lacteore* fits this

specimen. ZIRNGIEBL's name is a nomen in litteris, because a description of the taxon has never been published.

One further specimen of *A. aucupariae lacteore* held in the Zoologische Staatssammlung originates from Turkey (Ak-Chehir [=Akşehir], 1900, KORB leg., 1♂). Despite the bright coloration of the face this specimen has been determined as *A. aucupariae aucupariae* by ENSLIN and CLEMÉNT.

Tenthredopsis albopunctata (TISCHBEIN, 1852)

Athos peninsula: Karakalou, Filotheou, Ouranopolis, Simonos Petras (50-600 m NN), 23.4.-1.5.87 15♀ 5♂, the sawflies could frequently be observed visiting flowers of *Euphorbia* spec.

If the synonymisation of BENSON (1968) is right, this species has been reported from Greece by HELLÉN (1967) as *T. benthini* RUDOW, 1871.

In spring 1987 *T. albopunctata* was the most frequent sawfly on Mount Athos.

**Pontania kriechebaumeri* (KONOW, 1901)

Timfi massif: Vikos Gorge (500 m NN), 22.8.89, numerous galls on *Salix eleagnos*.

Salix eleagnos (= *incana*) is a typical tree growing on the river side in the Vikos Gorge (*Platanetum orientalis balcanicum* KÁRPÁTI, 1962, according to HORVAT, GLAVAČ and ELLENBERG 1974). The galls were found on the lower side of leaves of this willow species. They can be characterised as follows: nearly peashaped, colored yellowish white with whitish tomentous hairs, sparsely spotted with small red points (cf. KOPELKE 1991). ENSLIN (1913 and 1916) has described galls of this kind, which he had found growing on *Salix incana*, and from which he had reared *P. kriechebaumeri*.

Rearing of the Greek galls failed, because the collected material was spoiled by the heat in Greece.

Orussidae

Orussus abietinus (SCOPOLI 1763)

Olympus massif: Mt. Ossa near Larissa, end of June 1988 1♀, leg. WITZGALL.

O. abietinus is known from Greece and the adjoining countries Albania (HELLÉN 1967) and Bulgaria (TAEGER 1992, pers. comm.). Two further species of the *Orussidae*, *O. moroi* GUIGLIA, 1954 and *Mocsarya syriaca* BENSON, 1936, are native to Greece (SCHEDL 1985).

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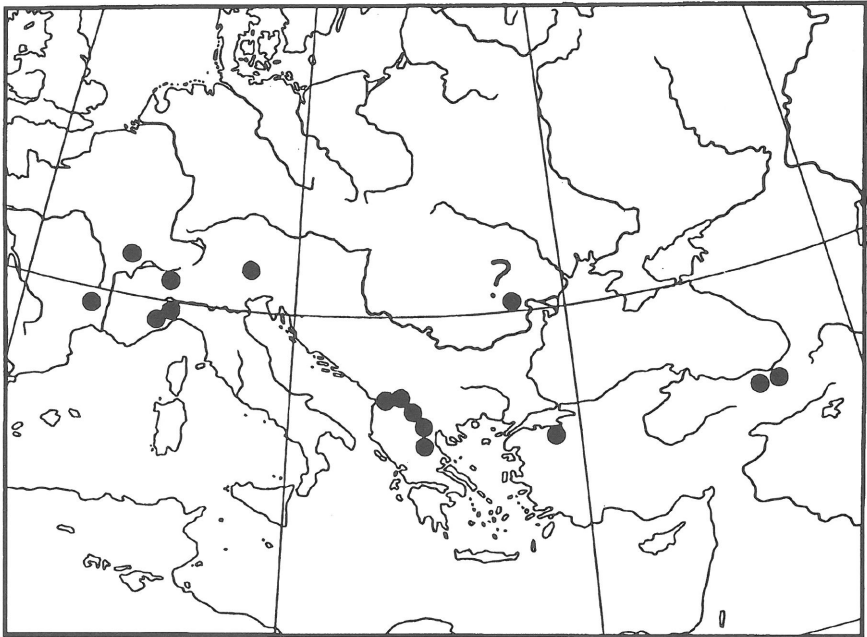


Fig. 1: Distribution of *Athalia paradoxa* KONOW 1886.