

The lacewings fauna of the Checheno-Ingushetia in the Caucasian region (Neuroptera)

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ÁBRAHÁM, L.: *The lacewings fauna of the Checheno-Ingushetia in the Caucasian region (Neuroptera)*

Abstract: The Hungarian entomologists did fieldwork five times in Checheno-Ingushetia on the basis of the agreement concluded between the Checheno-Ingushetian and the Hungarian zoologists between 1988-1991. 2351 specimens belonging to 57 species were recorded as result of this investigation. The author gives the list of collected material with all their faunistic data. The distribution of species are also described shortly and the typical habitats are illustrated by photos. Eleven species *Coniopteryx pygmaea*, *Coniopteryx tjederi*, *Sisyra terminalis*, *Hemerobius stigma*, *Hemerobius handschini*, *Wesmaelius concinnus*, *Symphorobius fuscescens*, *Micromus lanosus*, *Nineta inpunctata*, *Chrysopa reichardtii*, *Neuroleon tenellus* were proved to be new in the fauna of the Caucasian region. It is the first time for *Micromus lanosus* and *Nineta inpunctata* to be recorded in the fauna of Asia. Concerning its distribution *Osmylus elegantissimus* is the most important species in this region as it seems to be an endemic species in the Caucasian region. *Nineta inpunctata* and *Neuroleon tenellus* are new in the lacewings fauna in Russia as well.

Introduction

The excellent faunawork published on the neuropteroids fauna of Europe (ASPÖCK et al. 1980) has already shown that our knowledge from taxonomical, faunistic, ecological and chorological points of view is getting scarce due to the lack of data from the eastern region. This is conspicuous especially in the territory of former Soviet Union as it can be seen on the distribution maps of each species in the second volume of the monograph.

However, there are huge territories with rich fauna as well, but very few papers were published in this area (HAGEN 1858, DOROCHOVA 1973, KOVRIGINA 1978, ZAKARENKO 1980, ZAKARENKO-SEDYKH 1981 etc.).

The lacewings material preserved in different collections, if there are at all, is stored in unsatisfying circumstances without being attended by specialists.

Those problems, e.g.: misidentification of recording sites, cyrillic letters incorrectly transliterated into any of the European languages, have increased the lack of information as mentioned by ZAKARENKO-KRIVOKHATSKY (1993) in their paper.

The Caucasian region is the most exciting one in every respect of entomological researchwork as it is found on the border of Asia and Europe, although our knowledge on the neuropteroids fauna of this region is unsatisfactory due to the above mentioned reasons.

The Tolstoj University Grozny Checheno-Ingushetia, Plant Sanitary and Soil Protection Station of County

Komárom, Tata Hungary and Janus Pannonius Museum Pécs, Hungary gap tried to fill up this gap when the agreement concluded that Hungarian zoologists are allowed to do entomological fieldwork in Checheno-Ingushetia.

Between 1989-1991 14 Hungarian zoologists took part in five expeditions, which were mainly lepidopterological fieldwork but in this project they collected material of different insect orders: Neuroptera, Trichoptera etc. The members from Hungarian side who took part in the expeditions were:

Dr. B. Herczig, Dr. Z. Mészáros, Dr. K. Szöke, Mr. A. Sárközi, Mr. I. Oláh, Mrs. E. Hódi in 1988;

Dr. B. Herczig, Dr. Gy. Szollát, Mr. A. Sárközi, Mr. A. Horváth, Dr. Á. Uherkovich in 1989;

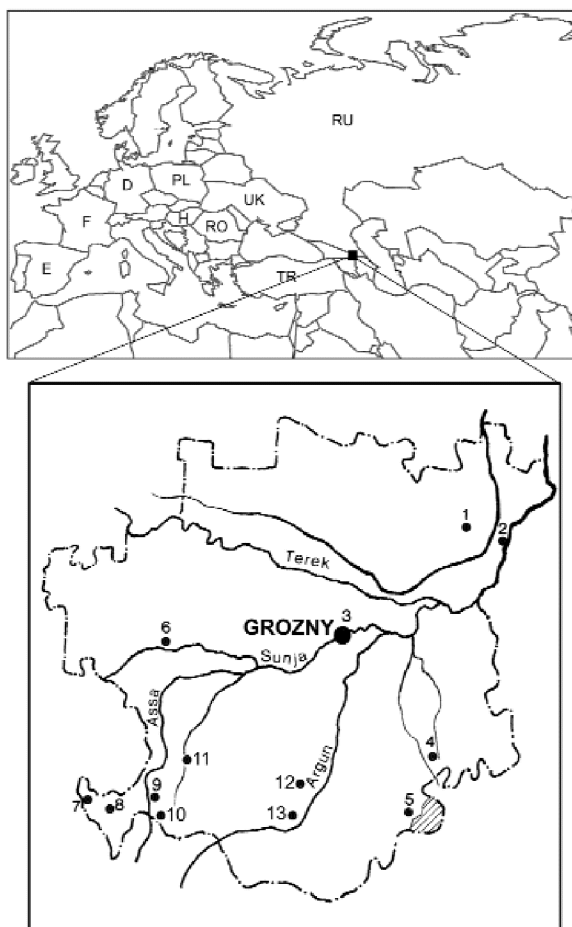


Fig. 1.: Collecting sites in Checheno-Ingushetia:
1. Voskresenskoye, 2. Starogladovskaya, Terek river,
3. Grozny, 4. Harachoy, 5. Kezenoy-am, 6. Troiskoya,
7. Furtoug, 8. Olgeti, 9. Shkolniy pass, 10. Torgim,
11. Fortanga, 12. Kerigo, 13. Itum-Kale

Dr. Á. Uherkovich and the author In May, 1990; Dr. B. Herczig, Dr. L. Ronkay, Dr. Gy. Bürgés, Mr. A. Sárközi in September, 1990;

Dr. B. Herczig, Dr. Z. Mészáros, Dr. V. Markó, Mr. G. Kusnyér és Mr. A. Horváth in July, 1991.

The fieldwork was organised by: Mrs. S. Korol, A. M. Bathiev, T. Y. Tocsiev and U. N. Giratulinu, teachers of Tolstoj University in Checheno-Ingushetia.

The main aim of this zoological agreement was to study the insect fauna of Checheno-Ingushetia and to give the first checklist of different orders of insects among them the lacewings. This paper published on the lacewings fauna of Checheno-Ingushetia has greatly contributed to the general knowledge of fauna of the country as in the near future, due to political and social reasons, we will not do entomological researchwork in this country.

Recording sites and methods

During the expedition journeys the collecting sites were chosen in the characteristic geographical area of Checheno-Ingushetia so as to belong proportionately to all types of habitat.

The northern part of the republic is mainly flat area, lowland; the middle part is a hilly area of 300 m high in average, which is intensively used for agriculture, so this area has hardly any natural habitats; the southern part of it is a mountainous area belonging to the Greater Caucasian range.

Three-to-five days were spent to record material in each characteristic area where neuropteroids were captured in different habitats; lacewings were taken mainly by mercury vapour bulbs 125 W at night fed by a light portable Honda generator set (type EX 350). I managed to collect materials of better quality and in greater quantities when I used methods like netting foliage and sweep netting. In the northern part of the republic where there were favourable places to collect ant lion larvae we dug out some third instar larvae to have them pupated.

Each collecting site is described shortly; fig. 1. shows their geographical localities and photos present the characteristics of different habitats.

1. Voskresenskoye (100 m)

The centre of the fieldwork was the surrounding Budari Hunter's Centre near Voskresenskoye on a flat area at the feet at Greater Caucasus. This area is a semi desert one covered by sand hills. Small sodic lakes can be found among the sand hills. The sandy soil was not covered by vegetation completely, there were places where sand was still moving those days. That sandy grassland seemed to be favourable for digging out ant lion larvae; besides we collected imagoes by lamp at night, by netting grass and herbage, foliage (Salix) grown in the surrounded small lakes and canals at daytime

2. Starogladovskaya, Terek river (100 m)

This recording place can be found at some kilometres' distance away from the previous settlement near a middle large river, Terek River where the fieldwork was done in soft woodlands. The typical vegetation consisted of Salix, Populus, Ulmus and Fraximus species.

3. Grozny (300 m)

We collected insects in the capital of Chechen Republic only occasionally. Some coniopterygids specimens were recorded from different planted Picea species by netting in a park of the city.

4. Harachoy (1100 m)

Records were done in the valley of Hulkulan stream in the deciduous wood zone of the northern part of Greater Caucasus. Lacewings were collected only by lamp, as the author did not visit this locality personally.

5. Kezenoy-am (1800 m)

This collecting site can be found near a deep lake, which has been formed by a landslide at 1700 m high above the sea level. There are mainly mountainous grasslands with poor vegetation, few bushes at that height. Small pine forests grow around the lake in the steep rocky valleys. Unfortunately, rather few lacewings could be recorded by lamp at night, as the weather was severe with strong winds when we visited it and I did not manage to collect by netting pine foliage.

6. Troiskoya (350 m)

This locality can be found in a hilly area in the middle part of Checheno – Ingushetia. During the journey some species were recorded by netting on foliage of bushes and trees along the road.

7. Furtoug (1200 m)

The collecting sites were on a mountain ridge jutting above Armhi River. This area is a rather warm and dry mountain range though it is found at a relatively high altitude above the sea level as it is surrounded by higher peaks. This open land is dissected by spurs of rock, cliffs and deep valleys. The woodlands live only in deep valleys next to streams and small artificial canals. The material could be recorded very efficiently by netting foliage and herbage in daytime.

8. Olgeti (700-1400m)

This locality also lies in the valley of Armhi River. Several different habitats were visited but all of them were situated in the deciduous zone. However, the higher we went, the more dominant the pine trees became and the material was collected by lamp.

9. Shkolniy pass (2100 m)

That was the highest collecting site during this fieldwork to be found near the route of Torgim basin. Here, only open mountainous grassland can be found at this high altitude. Rather a few materials were recorded by lamp at night.



Fig. 2.: Typical habitat of different collecting sites: 1. Voskresenskoye, 2. Kezenoy-am, 3: Furtoug,



Fig. 2. continued: Typical habitat of different collecting sites: 4. Olgeti, 5. Shkolniy pass, 6. Torgim

10. Torgim (1200 m)

The Torgim basin lying at high altitude is closed from every side by relatively high mountain ranges. The basin is crossed only by Assa River although its valley is very hard to walk through. Being protected by extreme weather conditions this area is drier and warmer than its surroundings. However, habitats are varied in the basin; dry open grasslands, thermophilous deciduous woods and coniferous woodland can be found. We collected both by lamp and by netting foliage here.

11. Fortanga (1100 m)

It can be localised in the valley of Fortanga river on the northern slope of the mountain range, south from Torgim basin. Here, lacewings were recorded in the deciduous wood zone only by lamp.

12. Kerigo (1000 m)

This area can be found in the valley of Argum River in the deciduous wood zone.

13. Itum-Kale (850 m)

It is in the vicinity of the previous recording place and the habitats of this area are similar. The materials were collected in either place only by lamp, as I have not succeeded in visiting these places personally.

Results

The recorded material was deposited in alcohol in the neuropteroids collection of Somogy County Museum, Kaposvár, Hungary. The name of the collectors are not marked in the list as they were the members of the Hungarian expeditions

Neuroptera

Coniopterygidae

Coniopteryx borealis TJEDER, 1930

Torgim June 10, 1990 1♀; June 11, 1990 2♀; Voskresenskoye June 1, 1990 2♀

The correct zoogeographical status of this species is uncertain; it may be expansive Mediterranean or polycentric Mediterranean- extra Mediterranean fauna element (ASPÖCK et al. 1980). It was recorded mainly in deciduous forests (fresh oak woodlands, hard woodlands) in Central Europe; it seems to be a rather hygrophilous species as these records in Checheno-Ingushetia also show; known in the Caucasian region but it has not been recorded in Checheno-Ingushetia yet (ZAKARENKO-KRIVOKHATSKY 1993).

Coniopteryx pygmaea ENDERLEIN, 1906

(= *Coniopteryx parthenia* NAVAS et MACRET, 1910)
Kezenoy-am June 5, 1990 2♀; Torgim June 8, 1990 13♀; June 10, 1990 30♀; June 12, 1990 13♀; Olgeti June 8, 1990 3♀

The zoogeographical status of this species is unknown for two reasons; one is that it was wrongly synonymized, referred to as *Coniopteryx parthenia* until recently, the other is that this species is so widespread that its status can not be described correctly without sufficient data. Having two or three generations a year, it seems to be strictly associated with conifers. It had already been recorded in the Caucasian region, as it was rather frequent in Checheno-Ingushetia.

Coniopteryx esbenpeterseni TJEDER, 1930

Furtoug June 9-12, 1990 2♀; Torgim June 10, 1990 1♀; It is an expansive Holomediterranean fauna element and one of the dominant species of the family in the centre of its distribution area in Central Europe; usually it has two generations a year. This species can be found in deciduous trees in temperate deciduous wood zone. In the Caucasian region it is only known in Georgia as referred by ZAKARENKO-KRIVOKHATSKY (1993), but ASPÖCK et al. (1980) and MEINANDER (1990) had already mentioned it as to be found in Azerbaijan, Armenia and Turkey as well.

Coniopteryx tjederi KIMMINS, 1934

Voskresenskoye May 31, 1990 1♂ 1♀; June 1, 1990 1♂; It is a Holomediterranean fauna element, which occurs in Morocco (MEINANDER 1972) and southern part of Turkey (ASPÖCK et al. 1980) outside of Europe. It is known in Moldova and Ukraine in the territory of the former Soviet Union (ZAKARENKO-KRIVOKHATSKY 1993). This species has not come up in the Caucasian region yet. The above-mentioned collecting sites can be found in the eastern part of the known area of this species. In Hungary specimens were often collected by netting foliage close to water bodies in softwoods of the large river valleys (ÁBRAHÁM 1998). It was recorded on leaves of *Salix* species on the beach of a canal near Budari Huntings' Center by the same method.

Conwentzia pineticola ENDERLEIN, 1905

Grozny May 28, 1990 2♂♂

It has a wide distribution in Holarctic region, so it has also been recorded in Georgia (ASPÖCK et al. 1980) in the Caucasian region. This species is strictly associated with pine trees. Now, it was also netted in planted *Pinus* specimens in a park of Grozny city.

Osmylidae

Osmylus elegantissimus KOZHANTSHIKOV, 1951

Furtoug June 9-12, 1990 8♂♂ 2♀; Harachoy Aug. 4, 1988 2♂♂ 2♀; Olgeti July 8, 1989 1♂; July 9, 1991 1♂; Torgim July 10, 1989 1♂; June 8, 1990 4♂♂ 1♀; June 11, 1990 2♂♂ 1♀

It seems that the distribution area of this species is restricted to the region of Caucasus and Lesser Caucasus mountain range (KOZHANTSHIKOV 1951, KRIVOKHATSKY 1995). Published records of the species from Crimea peninsula (DOROCHOVA 1985) should be confirmed (ZAKHARENKO-KRIVOK-

HATSKY 1993). Its habitat and behaviour shows that they are similar to *Osmylus fulvicephalus* known in Europe. This species prefers small brooks where banks are shaded by overhanging vegetation. It can be collected by netting on the lower canopy level at daytime and by lamp at night. The distribution of *Osmylus elegantissimus* is very exceptional as this species can be recorded in Armenia, Azerbaijan, Georgia only in the Caucasian region.

Sisyridae

Sisyra terminalis CURTIS, 1854

Voskresenskoye June 28, 1989 1♂

It probably has a Palaearctic distribution, although in the middle part of Palaearctic area has not been recorded yet. This species also occurs in the Eastern European Plain, in Russia and Ukraine (ZAKHARENKO 1978, 1988a) it was also found in the Kuril Islands, Khabarovsk, Primorje territory in Russia (MAKARKIN 1990). The only specimen was caught by lamp near a canal at Budari Hunting's Center.

Mantispidae

Mantispa styriaca (PODA, 1761)

Voskresenskoye June 28, 1989 1♀

It is an expansive Holomediterranean fauna element. At the present time the pattern of distribution of this species is known to be found in Palaearctic region from the Atlantic Ocean to Mongolia. However, its occurrence is very sporadic. It is known up to the 55th meridian in the south area of European district of the former Soviet Union. It was found in the Caucasian region in Lesser Caucasus, North Iran, Armenia and Turkey.

Mantispa ictérica PICTET, 1865 (= *Mantispa lobata* NAVAS, 1912)

Starogladovskaya Terek river June 30, 1989 1♀

The name of this species in the nomenclature is quite varied. We summarised the different varieties chronologically in our previous paper (ÁBRAHÁM-PAPP 1994). However, up to now *Mantispa mandarina* Navas, 1914 has become the best known among them on the basis of the fauna work written by ASPÖCK et al. (1980). In the literature written in Russian *Mantispa lobata* Navas, 1914 mentioned it several times (ZAKHARENKO 1987, 1988b). Since then ASPÖCK-ASPÖCK (1994) have described the European specimens as a new species belonging to *Mantispa aphavexelte* ASPÖCK-ASPÖCK, 1994 to distinguish the specimens in Inner Asia and in the Far East. So the zoogeographical status of this species is uncertain and its nomenclature revision is needed. It is already known from the Caucasian region (ZAKHARENKO-KRIVOKHATSKY 1993). It is a thermophilous species preferring rocky or sandy habitats. Usually it can be easily recorded by lamp at night.

Hemerobiidae

Hemerobius humulinus LINNAEUS, 1758

Fortanga July 13, 1991 1♂; Furtoug July 12, 1989 1♀; June 9-12, 1990 4♀ ♀; Harachoy Aug. 4, 1988 1♂ 2♀ ♀; Itum-Kale Aug. 11, 1988 2♀ ♀; Kerigo Aug. 9-10, 1988 1♀; Kezenoy-am July 5, 1989 1♀; Olgeti Shoun valley July 5, 1991 1♂; Troiskoya June 9, 1990 1♂ 1♀; Torgim Aug. 4-7, 1988 2♀ ♀; June 10, 1990 2♂♂ 1♀

This euryecious species is considered to be occurring in the whole of Holarctic region. It has been found in Russia (MAKARKIN 1985) and almost every republic in the Caucasian region (ZAKHARENKO-KRIVOKHATSKY 1993). All recording sites in Checheno-Ingushetia can be localised in the deciduous zone.

Hemerobius stigma STEPHENS, 1836

Furtoug July 2, 1991 1♂ 1♀; Olgeti June 8, 1990 1♂; Olgeti Shoun valley July 5, 1991 5♀ ♀; Shkolniy pass Aug. 5, 1988 2♂♂ 2♀ ♀; Torgim Aug. 4-6, 1988 1♂; June 10, 1990 3♀ ♀

It is another euryecious species widespread in the Holarctic region, although it is associated with pine trees. In spite of the fact that the species is rather frequent it has not been recorded in the Caucasian region but they were captured in areas lying north (KOVRIGINA 1978) and south (ASPÖCK et al. 1980) of it. Every collecting place in Checheno-Ingushetia was found in pine forests or mixed pine and deciduous forests.

Hemerobius nitidulus FABRICIUS, 1777

Furtoug Sept. 17, 1990 1♀; July 2, 1991 1♀; Kezenoy-am June 5, 1990 7♂♂ 1♀; Olgeti June 8, 1990 1♂ 1♀; Shkolniy pass Aug. 5, 1988 2♂♂ 1♀; June 8, 1990 1♀, Torgim June 10-12, 1990 2♂♂ 7♀ ♀

It is supposed to be a polycentric Siberian-Mediterranean fauna element. This species is one of a few hemerobiids associated with pines, which had already been known in Checheno-Ingushetia, our field-works also confirmed this experience.

Hemerobius handschini TJEDER, 1957

Torgim Aug. 4-6, 1988 1♀

It is a Holomediterranean fauna element. Records are known mainly in Ukraine in the former Soviet Union. The dry, warm continental climate could be favourable for this species to colonise in the Torgim basin surrounded by high mountains. The nearest known recording sites are in the northern part of Turkey and in the Crimean peninsula.

Hemerobius micans OLIVIER, 1792

Furtoug July 12, 1989 3♂♂; June 12, 1990 1♀; Olgeti Leshgi July 1, 1991 1♀; Olgeti Shoun valley July 5, 1991 2♂♂ 1♀; Shkolniy pass Aug. 5, 1988 1♀; Torgim Aug. 4-7, 1988 1♀; June 10, 1990 1♀

It is considered to be an euryecious, Siberian fauna element; widespread in deciduous zone in western Palaearctic region. This species had already been recorded in Checheno-Ingushetia besides its occurrence in Georgia, Armenia and Stavropol lowland in the Caucasian region.

Hemerobius lutescens FABRICIUS, 1793

Harachoy Aug. 4, 1988 2♀ ♀; Furtoug June 12, 1990 2♂♂; Sept. 17, 1990 1♀ ♀; July 2, 1991 2♂♂ 1♀ ♀; Olgeti Shoun valley July 5, 1991 9♀ ♀; Shkolniy pass Aug. 5, 1988 1♀ ♀; Torgim June 10, 1990 1♀ ♀

Its ecological type and zoogeographical status of this species is the same as of the above-mentioned species. The known records are given by ZAKHARENKO-KRIVOKHATSKY (1993), all of them occur in the deciduous zone of the republic.

Hemerobius marginatus STEPHENS, 1836

Torgim July 11, 1989 1♀ ♀

It seems to be a Siberian fauna element living in such humid and warm habitats that are to be found in the Torgim basin. This species has already been recorded in several republics of the Caucasian region as well as in Checheno-Ingushetia although it appears a common species in the wooded-steppe zone (ZAKHARENKO 1979).

Wesmaelius concinnus (STEPHENS, 1836)

Shkolniy pass Aug. 5, 1988 1♂♂; June 8, 1990 1♂♂; Torgim June 10-12, 1990 14♂♂ 4♀ ♀

The zoogeographical status of this species is uncertain. The occurrence of this species seems to be strictly associated with conifers. It was recorded in coniferous zone (DOROCHOVA 1973, ZAKHARENKO-SEDYKH 1981) in north-eastern Europe and nearby Irkutsk (MAKARKIN 1986) in the Siberian region. It has not been found in the fauna of hemerobiids in Mongolia (POPOV 1986). It has also occurred at the western and eastern feet of Caucasian mountains so it may live in the extent the Caucasian region.

Wesmaelius nervosus (FABRICIUS, 1793)

Furtoug June 9, 1990 1♀ ♀; June 12, 1990 2♀ ♀; Olgeti June 8, 1990 1♂♂; July 9, 1991 1♂♂; Olgeti Leshgi July 1, 1991 1♂♂; Olgeti Shoun valley July 5, 1991 7♂♂; Skolniy pass Aug. 5, 1989 1♂♂; Torgim June 10, 1990 1♀ ♀

It is an euryecious, Siberian fauna element. Being a common species in almost the entire area of the Palaeartic region it has already been recorded in Checheno-Ingushetia.

Wesmaelius malladai (NAVAS, 1925)

Furtoug July 12, 1989 11♂♂ 14♀ ♀; Kezenoy-am July 4, 1989 1♂♂; July 5, 1989 1♂♂; Olgeti July 11, 1989 2♂♂ 2♀ ♀; Torgim July 10, 1989 1♂♂ 1♀ ♀

It has an Arctic-Alpine distribution with recording localities known only in alpine zone of western Palaeartic region (ASPÖCK et al. 1980). This species occurs at a relatively low altitude in Komi ASSK in Russia (ZAKHARENKO-SEDYKH 1981). It was found only at two sites in Severnaja Osetija in the Caucasian region, the neighbour country of Checheno-Ingushetia, and in north-eastern Turkey where it lives in subalpine zone.

Wesmaelius subnebulosus (STEPHENS, 1836)

Kezenoy-am July 12, 1991 1♂♂

It is an euryecious Mediterranean fauna element known

in Dagestan and Armenia (ZAKHARENKO-KRIVOKHATSKY 1993). It is widespread in association with deciduous trees and often occurs in parks and orchards.

Wesmaelius ravus (WITHYCOMBE, 1923)

Olgeti Shoun valley July 9, 1991 2♂♂ 1♀ ♀

The distribution of this species is still poorly known. It prefers warm and dry habitats, associated with coniferous trees. Very few records are known in the territory of the former Soviet Union (KOVREGINA 1978). It was collected in Dagestan in this region and is a rare species in Europe as well.

Wesmaelius navasi (ANDRÉU, 1911)

Furtoug July 2, 1991 17♂♂ 3♀ ♀; July 12, 1991 1♂♂ 2♀ ♀; Olgeti Shoun valley July 5, 1991 3♂♂

It is supposed to have Eremial distribution. In the Middle Asian countries of the former Soviet Union it is wide spread. This species lives only in Mediterranean Europe. Its typical habitats are dry and warm grassy areas where it can be recorded on lower vegetation.

Symphorobius elegans (STEPHENS, 1836)

Shkolniy pass Aug. 5, 1988 1♀ ♀; Voskresenskoye June 26-27, 1989 1♀ ♀

It is an expansive Mediterranean fauna element, which occurs mainly in deciduous zone in West Palaeartic region. Its area spreads as far as Kazakhstan in Asia, but it had been known only in Azerbaijan. Both localities in Checheno-Ingushetia show its spread from 100 m to 2000 m high above sea level.

Symphorobius pygmaeus (RAMBUR, 1842)

Voskresenskoye May 30, 1990 1♂♂

Being distributed similarly to the previous species it is an expansive Holomediterranean fauna element; known area also spreads to Kazakhstan. It has already occurred in several countries in the Caucasian region (ZAKHARENKO-KRIVOKHATSKY 1993).

Symphorobius fuscescens (WALLENGREN, 1863)

Torgim June 10-12, 1990 3♂♂ 6♀ ♀

It is a Siberian fauna element, supposedly living everywhere in the mountainous Palaeartic region covered by coniferous trees. Its distribution is strictly associated with Pinus. In the Caucasian region it has not been recorded yet.

Megalomus tortricoides RAMBUR, 1842

Furtoug July 12, 1989 2♂♂ 1♀ ♀; June 12, 1990 2♂♂; Harachoy Aug. 4, 1988 1♀ ♀; Itum-Kale Aug. 11, 1988 1♀ ♀; Kerigo Aug. 9-10, 1988 2♂♂ 1♀ ♀; Skolniy pass Aug. 5, 1988 2♂♂ 2♀ ♀; Torgim Aug. 4-7, 1988 1♂♂; S-from Torgim Aug. 7, 1988 1♂♂ 1♀ ♀

It is a Holomediterranean fauna element known only in a single recording site in Ukraine in the Eastern European Plain. However, it has already been captured in several republics in the Caucasian region (ZAKHARENKO-KRIVOKHATSKY 1993), although it is

the first time to have been recorded in Checheno-Ingushetia.

Micromus variegatus (FABRICIUS, 1793)

Furtoug July 12, 1989 1♂; June 12, 1990 1♀; Itum-Kale Aug. 11, 1988 1♀; Starogladovskaya Terek river June 30, 1989 1♂. This widespread and common species in Palaearctic is supposed to be an euryecious and polycentric Siberian-Mediterranean fauna element. It has already been recorded in Checheno-Ingushetia living mainly on herbage and lower vegetation.

Micromus angulatus (STEPHENS, 1836)

Fortanga July 13, 1991 1♀; Furtoug July 12, 1989 1♂; July 2, 1991 1♀; Olgeti July 11, 1989 1♀, Starog-ladovskaya Terek river May 31, 1990 1♂ 1♀. It is as a widespread and common one as the previous species occurring in the whole of Holarctic region; known in Checheno-Ingushetia.

Micromus paganus (LINNAEUS, 1767)

Furtoug Sept. 17, 1990 1♂; Olgeti July 11, 1989 1♀; Olgeti Shoun valley July 5, 1991 1♂; July 5, 1991 27♂♂ 4♀♀; Shkolniy pass July 9, 1989 1♀; Torgim Aug. 4-7, 1988 1♂. This species is a Siberian fauna element; the area spreads throughout Palaearctic. It had already been known in Checheno-Ingushetia.

Micromus lanosus (ZELENY, 1962)

Olgeti Shoun valley July 5, 1991 1♀. The zoogeographical status is uncertain, recorded mainly in Central Europe. It was captured in Ukraine in the territory of the former Soviet Union. That was the first record in the fauna of Asia.

Chrysopidae

Nineta flava (SCOPOLI, 1763)

Furtoug July 12, 1989 7♂♂ 25♀♀; June 12, 1990 2♂♂; July 2, 1991 2♂♂ 13♀♀; Harachoy Aug. 4, 1989 6♂♂ 18♀♀; Itum-Kale Aug. 11, 1988 2♂♂ 7♀♀; Kerigo Aug. 9-10, 1988 1♂; Kezenoy-am July 12, 1991 1♀; Olgeti July 11, 1989 1♀; Olgeti Shoun valley July 9, 1991 1♀; July 5, 1991 3♂♂ 5♀♀; Shkolniy pass Aug. 5, 1988 2♂♂ 1♀; Torgim Aug. 4-7, 1988 3♂♂ 6♀♀; July 10, 1989 1♂. It is an euryecious species known in the deciduous zone in Europe. Its distribution area spreads to Minor Asia (ASPÖCK et al. 1980) and Caucasian region (ZAKHARENKO-KRIVOKHATSKY 1993) in Asia. This species seems to be a rather common one in the field-work.

Nineta inpunctata (REUTER, 1894)

Furtoug July 12, 1989 1♂; July 2, 1991 3♀♀. This species was described by Reuter in 1894 in Finland as *Chrysopa septempunctata* var. *inpunctata*. When Klingstedt revised Reuter's collection, he rightly verified the taxonomical position of *Nineta inpunctata*. TJEDER (1938) found that it belonged to *Nineta flava* group. Later only very few specimens were recorded in

North and Central Europe (ÚJHELYI 1974, GREVE 1985) again. At present the distribution area of this species with low abundance was exhibited by HÖLZEL (1984).

The occurrence of *Nineta inpunctata* in Checheno-Ingushetia was surprising, because the new locality of Caucasus is at 1000 km distance away from both known occurrences. It seems that the area of this species had been still unknown. Altogether four *Nineta* species (*N. flava*, *N. vittata*, *N. carinthiaca* (MAKARKIN 1990), *N. pomacea* (ZAKHARENKO 1983)) were revealed in the former Soviet Union; the *Nineta flava* was recorded in some localities in the Great European Plain. DOROCHOVA (1987) mentioned *Nineta inpunctata* without any known locality but it has not been reported again in the fauna work published by ZAKHARENKO-KRIVOKHATSKY (1993). Supposedly it is as rare species in the Caucasian region as well as in Europe.

Chrysotropia ciliata (WESMAEL, 1841)

Fortanga July 13, 1991 2♀♀; Furtoug July 12, 1989 1♀; June 9-12, 1990 3♂♂ 4♀♀; July 2, 1991 2♂♂; Harachoy Aug. 4, 1988 1♂ 2♀♀; Itum-Kale Aug. 11, 1988 17♂♂ 42♀♀; Kerigo Aug. 9-10, 1988 6♂♂ 3♀♀; Olgeti July 9, 1991 3♀♀; Olgeti Leshgi July 1, 1991 2♂♂ 1♀; Olgeti Shoun valley July 5, 1991 3♀♀; Shkolniy pass Aug. 5, 1988 12♂♂ 6♀♀; Torgim Aug. 4-7, 1988 9♂♂ 7♀♀; June 10-12, 1990 6♂♂ 2♀♀.

It is supposed to be a Siberian faunal element, known in many localities with high density in humid forest in Checheno-Ingushetia, although up to now this species has not been recorded in this area yet.

Chrysopa perla (LINNAEUS, 1758)

Furtoug June 9-12, 1990 13♂♂ 5♀♀; July 2, 1991 1♂ 2♀♀; Harachoy Aug. 4, 1988 1♀; Itum-Kale Aug. 11, 1988 1♂ 7♀♀; Kerigo Aug. 9-10, 1988 6♀♀; Shkolniy pass June 8, 1990 1♂; Torgim July 11, 1989 1♀; June 8, 1990 1♂; June 10-12, 1990 18♂♂ 12♀♀; Troiskoya June 9, 1990 1♂; Voskresenskoye June 28, 1989 1♀. It is considered to be an euryecious species, common everywhere in its distribution area, spreads as far as Mongolia.

Chrysopa walkeri McLACHLAN, 1893

Harachoy Aug. 4, 1988 1♂; Itum-Kale Aug. 11, 1988 5♀♀; Kerigo Aug. 9-10, 1988 2♂♂. It is a rather rare species, so the zoogeographical status of this species is still uncertain. Having been recorded in the Caucasian region it prefers low vegetation and warm habitats.

Chrysopa dorsalis BURMEISTER, 1839

Olgeti June 8, 1990 1♂; Shkolniy pass Aug. 5, 1988 1♀; Torgim June 11, 1990 1♂. It is regarded to be an expansive Pontomediterrean species. This species is associated with pines on its collecting localities; known from Israel, Turkey and Georgia in Asia (SENGONCA 1979).

Chrysopa hungarica KLAPALEK, 1899

Furtoug June 9-12, 1990 48♂♂ 29♀♀
It is a Pontomediterrean fauna element, known in Dagestan in this region. It is considered to be a very rare species in the whole of its distribution area, however, it has a high abundance as this above record shows. In Turkey it also lives in high population, but occurs very sporadically. It has daytime activity, illustrated by the fact that the only specimen was collected at the same recording place at Furtoug at night. Besides its flight period may be short, that is why it is difficult to detect. In daytime the specimens were recorded on low vegetation at a very warm place, where a small brook provided enough water to keep this locality humid. I did not managed to capture it by netting foliage but it was abundant on low vegetation close to floating water.

Chrysopa abbreviata CURTIS, 1834

Furtoug July 12, 1989 5♀♀; June 12, 1990 2♀♀; Itum-Kale Aug. 11, 1988 1♂ 11♀♀; Voskresenskoye June 29, 1989 1♀; May 30, 3♂♂ 13♀♀; May 31, 2♂♂ 9♀♀; June 1, 1990 3♀♀; June 2, 1990 1♂ 7♀♀
It is a Siberian fauna element, lives in warm, dry and grassy habitats. Its area spreads as far as Mongolia in the East; known in Stavropol lowland nearby Checheno-Ingushetia.

Chrysopa reichardi BIANCHI, 1931 (= *Chrysopa altaica* HÖLZEL, 1967)

Voskresenskoye June 1, 1990 1♀
It seems that the taxonomical position of this species is still uncertain as authors from Central Europe (HÖLZEL 1967, GÜNTHER 1991, SZIRÁKI 1994) and the former Soviet Union (ZAKHARENKO 1991) mentioned it with different names. It is supposed to be a Mongolian-Siberian fauna element. Known distribution seems to be widespread occurring from Middle Europe (GÜNTHER 1991) via Eastern European Plain (ASPÖCK et al. 1980) and Inner Asia to Far East Asia (ZAKHARENKO-KRIVOKHATSKY 1993). It has not been recorded in the Caucasian region yet.

Chrysopa formosa BRAUER, 1850

Furtoug July 12, 1989. 2♀♀; Itum-Kale Aug. 11, 1988 7♂♂ 55♀♀, Starogladovskaya June 30, 1989 1♂; Troiskaya June 9, 1990 1♀; Voskresenskoye June 28, 1989 1♀; May 30-June 2, 1990 42♂♂ 42♀♀
It occurs in the whole Palaeartic region having a polycentric zoogeographical distribution. This species is supposed to associate with dry and warm habitats living in both grassland and forest. It had already been recorded in every republic of the Caucasian region except in Checheno-Ingushetia

Chrysopa dubitans McLACHLAN, 1887

Starogladovskaya, Terek river June 30, 1989 2♀♀; Voskresenskoye June 28, 1989 1♀
It occurs mainly in Eremial district in Palaeartic, known

only in Spain and Greece in Europe (ASPÖCK et al. 1980), although we have some data on its distribution in the steppe zone in the Great European Plain (KOV-RIGINA 1978). The only record was known in Armenia in the Caucasian region; grasslands can be found in every collected locality.

Chrysopa phyllochroma WESMAEL, 1841

Furtoug July 12, 1989 1♂ 1♀, Starogladovskaya Terek river June 30 1989 1♀; Voskresenskoye June 26-27, 1989 1♂; May 29-30, 1990 1♂ 1♀
It is a Siberian fauna element, spreads almost in the whole of Palaeartic. The closest locality where it can be found is Stavropol lowland (ZAKHARENKO-KRIVOKHATSKY 1993) the neighbouring territory of Checheno-Ingushetia. It lives mainly in grassy habitats.

Chrysopa commata KIS et ÚJHELYI, 1965

Furtoug July 2, 1991 1♂; Starogladovskaya Terek river June 30, 1989 1♂ 1♀
It is an expansive Pontomediterranean fauna element, occurs mainly in the same area as the previous species. It prefers dry grassland, known in the Caucasian region.

Chrysopa viridana SCHNEIDER, 1845

Torgim June 12, 1990 1♂; Voskresenskoye May 31, 1990 1♂
It is a Holomediterrean fauna element occurring in oak forest zone in western Palaeartic region. ZAKHARENKO-KRIVOKHATSKY (1993) have already published data on its occurrence in the Caucasian region but up to now it has not been reported in Checheno-Ingushetia yet.

Chrysopa nigricostata BRAUER, 1850

Itum-Kale Aug. 11, 1988 2♀♀; Shkolniy pass Aug. 5, 1988 4♂♂ 1♀; Torgim Aug. 4-7, 1988 1♀; Voskresenskoye May 30, 1990 1♀
It is an expansive Holomediterrean fauna element. Its distribution spreads to Middle Asia (ASPÖCK et al 1980) living in warm but rather humid habitats. It has not been recorded in Checheno-Ingushetia yet.

Chrysopa pallens (RAMBUR, 1838)

Fortanga July 19, 1991 1♂; Furtoug July 12, 1989 1♀; June 12, 1990 1♀; Grozny June 7, 1990 1♂; Itum-Kale Aug. 11, 1988 1♂ 1♀; Kerigo Aug. 9-10, 1988 1♂ 5♀♀; Starogladovskaya Terek river May 31, 1990 1♂; Troiskoya June 9, 1990 1♂ 1♀; Voskresenskoye May 30-June 1, 1990 5♂♂ 5♀♀
It is an euryecious species having widespread distribution inside and outside of Palaeartic region. This species was known in almost all republics in the Caucasian region except in Checheno-Ingushetia.

Dichochrysa prasina (BURMEISTER, 1839)

Furtoug July 12, 1989 8♂♂ 80♀♀; June 9-12, 1990 139♂♂ 111♀♀; July 2, 1991 58♂♂ 246♀♀; July 12, 1991 1♂ 1♀; Sept. 17, 1991 1♀; Grozny June 7, 1990 1♂ 4♀♀; Harachoy Aug. 4, 1988 26♂♂ 51♀♀; Itum-Kale Aug. 11, 1988 32♂♂

109♀ ♀; Kerigo Aug. 9-10, 1988 15♂♂ 43♀ ♀; Kezenoy-am July 12, 1991 1♂; Olgeti July 11, 1989 1♀; Shkolniy pass Aug. 5, 1988 15♂♂ 15♀ ♀; June 8, 1990 3♂♂; Starogladovskaya Terek river May 31, 1990 3♂♂ 8♀ ♀; Torgim Aug. 4-7, 1988 5♂♂ 10♀ ♀; July 10, 1989 1♂ 3♀ ♀; June 10-12, 1990 34♂♂ 23♀ ♀; Troiskoya June 9, 1990 1♂ 2♀ ♀; Voskresenskoye May 30 - June 1, 5♂♂ 13♀ ♀
It is considered to be an expansive polycentric Siberian-Mongol-Mediterranean fauna element, euryecious species. This species is widespread in the former Soviet Union, although it has not been recorded in Checheno-Ingushetia yet, in spite of the fact that it was the most abundant species during the fieldwork.

Chrysoperla carnea (STEPHENS, 1836) complex

Furtoug July 12, 1989 17♂♂ 93♀ ♀; June 12, 1990 1♂ 1♀; Sept. 17, 1990 2♂♂; July 2, 1991 1♂ 4♀ ♀; Grozny June 7, 1990 1♂; Harachoy Aug. 4, 1988 4♂♂ 6♀ ♀; July 12, 1991 1♀; Itum Kale Aug. 11, 1988 6♂♂ 10♀ ♀; Kezenoy-am July 5, 1989 1♀; Sept. 11, 1990 1♂ 1♀; Olgeti July 7, 1989 1♀; July 8, 1989 1♀; July 11, 1989 3♀ ♀; July 9, 1991 1♀; Olgeti Shoun valley July 5, 1991 1♂ 5♀ ♀; Starogladovskaya Terek river June 30, 1989 4♂♂ 9♀ ♀; Torgim Aug. 4-7, 1988 1♀; July 10, 1989 4♀; Voskresenskoye June 26-28, 1989 4♀ ♀; June 1, 1990 1♂ 1♀

The species of this complex the hardly be distinguished from each other by morphological characteristics; distribution and zoogeographical status of these species have been not known properly yet. It seems to be one of the dominant species in the Caucasian region as well as in Europe.

Cunctochrysa albolineata (KILLINGTON, 1935)

Furtoug July 12, 1991 2♀ ♀; Harachoy Aug. 4, 1988 1♂ 3♀ ♀; Itum-Kale Aug. 11, 1988 8♂♂ 25♀ ♀; Kerigo Aug. 9-10, 1988 3♂♂; Olgeti Shoun valley July 9, 1991 1♀; Shkolniy pass Aug. 5, 1988 7♀ ♀; Torgim Aug. 4-7, 1988 1♂ 2♀ ♀
It is an euryecious species and Siberian fauna element; widespread in the Caucasian region.

Myrmeleontidae

Acanthaclisis occitanica (VILLERS, 1789)

Voskresenskoye June 26, 1989 3♂♂ 1♀
It is a Holomediterranean fauna element, known area spreads as far as Tomsk in Western Siberian Lowland. This species lives mainly in large sandy areas in European lowlands, but occurs in warm and light soil areas at least 2000 m high in south-western Asia. It is a rare species, had already been known in Checheno-Ingushetia.

Nohoveus punctulatus (STEVEN, 1822)

(=*Myrmaecelurus zigan* ASPÖCK, ASPÖCK et HÖLZEL, 1980)

Starogladovskaya June 30, 1989 1♂ 2♀ ♀; Voskresenskoye (ex larva) Aug. 1, 1990. 1♂ 1♀
It is considered to be a Mongolian Eremial fauna element occurring as far as Hungary in the west. This species had already been found in the Caucasian

region. Mostly it has a high abundance in its habitat living in open sandy grasslands; can be recorded in daytime or in dusky hours; pit building species (ÁBRAHÁM-PAPP 1990).

Myrmeleon incospicuus RAMBUR, 1842

Voskresenskoye (ex larva) Aug. 1, 1990 1♂ 1♀
It is a Holomediterranean fauna element known in the Caucasian region. Its pits are usually built in open sandy grasslands. Larvae were collected on the fourth expeditions then they were developed to determine the species.

Myrmeleon immanis WALKER, 1853

Voskresenskoye (ex larva) July 30, 1990 1♂ 3♀ ♀
It is considered to be a Mongolian Eremial fauna element. This species has been known in the Caucasian region only in Checheno-Ingushetia (ZAKHARENKO-KRIVOKHATSKY 1993). Its larvae like the larvae of *Myrmeleon inconspicuus* were recorded in semi desert area to be identified later. The habitat is similar to the previous species, pit-building species.

Neuroleon tenellus (KLUG, 1834)

Voskresenskoye June 26, 1989 1♂; June 28, 1989 1♀; June 1, 1990 1♀
This species is supposed to be an Eremial fauna element occurring in the southern part of Palaearctic region known from Tunisia to Afghanistan in west-east direction (ASPÖCK-HÖLZEL 1996) found it in area stretching from Saudi Arabia to Turkmenistan (KRIVOKHATSKY 1994) in north-south direction. It has been unknown in the Caucasian region so it is also new in the neuropteroid fauna of Russia. The specimens were recorded by light in semi desert area in Checheno-Ingushetia.

Distoleon tetragrammicus (FABRICIUS, 1798)

Starogladovskaya June 30, 1989 2♂♂
It is considered to be an expansive Holomediterranean fauna element; its area spreads in Europe and West Asia. It has already been recorded in several republics in the Caucasian region (ZAKHARENKO-KRIVOKHATSKY 1993).

Megistopus flavicornis (ROSSI, 1790)

Voskresenskoye May 31, 1990 1♂; Starogladovskaya Terek river May 31, 1990 1♂
It is a Holomediterranean fauna element, known in the Caucasian region; its distribution is similar to the previous species (ZAKHARENKO-KRIVOKHATSKY 1993).

Ascalaphidae

Libelloides macaronius (SCOPOLI, 1763)

Torgim July 11, 1989 2♂♂, 1♀; June 11, 1990 1♂
It is an expansive Pontomediterranean fauna element. I have not found differences in the morphological characteristics of the specimens when I compared the material recorded near locus typicus of this species in

Slovenia or Croatia with the material recorded in Checheno-Ingushetia. However, specimens coming from the eastern part of Caspian Sea have to be evaluated on the basis of morphological and genitalia features as these population are highly variable. This species is known in several republics in the Caucasian region. It lives in dry and warm habitats, larvae hide under graves and gaps of soil into where it can climb with its flat body. However, it always lives in a rather moist microhabitat where it can survive at as high temperature as 50 C°. Imagoes are heliophil, its eggs are laid in a group in the middle part of grass blades at least at a height of 50-60 cm to avoid overheating the same way as the snails.

Results and discussion

Between 1989-1991 the Hungarian entomologists took part in five expeditions in Checheno-Ingushetia on the basis on a zoological agreement concluded by Tolstoj University (Grozny Checheno-Ingushetia and Plant Sanitary and Sail Protection Station of county Komárom (Tata Hungary) and Janus Pannonius Museum (Pécs, Hungary).

Lacewings material from 13 different localities, 57 species belonging to 2351 specimens were collected in these fieldworks.

Until then we hardly had any information on the lacewing fauna of Checheno-Ingushetia. Only data of 9

species could be found in different publications (ZAKHARENKO-KRIVOKHATSKY 1993). All of them, except *Myrmeleon immanis*, are widespread, rather common species. According to publications and lacewing's collections faunistical data of 53 species had already been known for the whole the Caucasian region.

Now 11 species published in this paper are new in the lacewing fauna of this region *Coniopteryx pygmaea*, *Coniopteryx tjederi*, *Sisyra terminalis*, *Hemerobius stigma*, *Hemerobius handschini*, *Wesmaelius concinnius*, *Symphorobius fuscescens*, *Micromus lanosus*, *Nineta inpunctata*, *Chrysopa reichardti*, *Neuroleon tenellus*. It is the first time for *Micromus lanosus* and *Nineta inpunctata* to be recorded as a new species in the fauna of Asia. Nowadays *Micromus lanosus*, *Nineta inpunctata*, *Myrmeleon immanis* and *Neuroleon tenellus* are found only in Checheno-Ingushetia in the Caucasian region. It seems that *Osmylus elegantissimus* is an endemic species in the Caucasian region on the basis of its data of distribution as recording data from Crimea peninsula (DOROKHOVA 1987) should be confirmed (ZAKHARENKO-KRIVOKHATSKY 1993).

Coniopteryx tjederi, *Wesmaelius concinnius*, *Hemerobius handschini*, *Micromus lanosus* and *Nineta inpunctata* having mainly European distribution occur at the eastern edge of their distribution area. *Nineta inpunctata* and *Neuroleon tenellus* are new in the lacewing fauna of Russia.

A Kaukázus régió Csecsen-Ingush területének recésszárnyú faunája (Neuroptera)

ÁBRAHÁM LEVENTE

1989 és 1991 között a Csecsen-Ingush és Magyar zoológiai együtt működés keretében öt alkalommal vettek részt magyar entomológusok a Csecsen-Ingush köztársaság területén gyűjtő expedíciós úton, ahol 13 lelőhelyen sikerült recésszárnyú (Neuroptera) anyagot gyűjteni. A gyűjtő utak során 57 faj, 2351 példányát fogták meg a kutatók.

A Csecsen-Ingush köztársaság Neuroptera faunájáról nagyon hiányosak voltak ismereteink. Összesen 9 fajnak találtuk meg az adatát (ZAKHARENKO-KRIVOKHATSKY 1993) a különböző publikációkban. Ezek mindegyike - kivéve a *Myrmeleon immanis* fajt - széles elterjedési területtel rendelkező, gyakori faj.

A Kaukázus régiójában a gyűjteményi és a publikált adatok szerint 53 faj előfordulása volt már ismert. A most közölt fajok adatai szerint 11 faj elsőként került elő a Kaukázus Neuroptera faunájából (*Coniopteryx pygmaea*, *Coniopteryx tjederi*, *Sisyra terminalis*, *Hemerobius stigma*, *Hemerobius handschini*, *Wesmaelius concinnius*, *Symphorobius fuscescens*,

Micromus lanosus, *Nineta inpunctata*, *Chrysopa reichardti*, *Neuroleon tenellus*).

A *Micromus lanosus* és a *Nineta inpunctata* Ázsia Neuroptera faunájából is most vált ismertté először. Jelenleg a *Micromus lanosus*, *Nineta inpunctata*, *Myrmeleon immanis* és a *Neuroleon tenellus* fajok a Kaukázus vidékéről csak a Csecsen-Ingush köztársaságból ismertek. Az eddigi elterjedési adatai alapján úgy tűnik a Kaukázus vidék különösen figyelemre méltó endemikus faja az *Osmylus elegantissimus*, mivel a Krím-félszigetről (DOROKHOVA 1987) ismertetett előfordulási helye még megerősítésre vár (ZAKHARENKO-KRIVOKHATSKY 1993). A főként európai elterjedési területtel rendelkező fajok közül pedig a *Coniopteryx tjederi*, *Wesmaelius concinnius*, *Hemerobius handschini*, *Micromus lanosus* és a *Nineta inpunctata* fajok areájának legkeletibb lelőhelye is itt található.

A *Nineta inpunctata* és a *Neuroleon tenellus* új faj Oroszország Neuroptera faunájában is.

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