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Neuropterida of the Majella National Park (Italy)

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The Majella National Park, consisting of about 75,000 hectares, is a protected key-area situated at the heart of the central Apennines peculiar from several point of view of nature conservation. With the present contribution, the authors present a preliminary checklist of Neuropterida of the Majella National Park. Neuropterida were occasionally collected during a research project on Coleoptera carried out from July 2000 to January 2006, and with a specific survey in July 2005. A review of publications with distributional data is included.

Key words – Checklist, Neuropterida, Majella National Park, faunistics, chorology.

Introduction

In the last decade several contributions have been published about Neuropterida in Italian natural protected areas mainly in the Apennines (Letardi, 1998, 2002, 2004; Letardi & Maltzeff, 2001; Letardi & Migliaccio, 2002).

These researches have been carried out both for deepening knowledge concerning the Neuropterofauna of Apennines and for providing data about the existent biodiversity to the managing authorities of the protected areas. The territory of the Majella National Park, which is neighbours the recently investigated Abruzzo, Latium and Molise National Park (Letardi & Migliaccio, 2002), is peculiar for several point of view of nature conservation.

The Majella National Park, consisting of about 75.000 hectares, is situated at the heart of the central Apennines and covers a wide area which comprises the massif of the Majella, the Monti Pizzi - Mt. Secine chain and the massif of the Morrone. The whole area is principally made up of several mountain chains, rising from an altitude of 400-500 to 2.800 m above sea level, deeply engraved by valleys, often forming spectacular canyons. A vast plateau characterizes the rounded massif of the Majella above 2.000 m, with frequent phenomena of glacialism and karstification.

On the Majella there is clear evidence of the different covering of Apennine vegetation. At lower elevations there are woods formed of oaks, maples, hornbeams, lindens, manna-ashes, and holm-oaks. Higher up, towards 900-1.000 m the forest covering is made up of beech and mountain maple. Almost everywhere it is possible to see the yellow Laburnum, supporting the hypothesis that the word Majella could come from “maio”, an old name the local population gave to this plant. In the beech altitudinal belt it has to keep account of the autochthonous nucleous of birch, in the Valle Fara S. Martino, and Austrian pine, in the Valle Serviera. In the Morrone, two distinct nucleous of fir are also present, possibily of relict origin. Up above, towards 1700 m, and only in the Majella, there are thick formations of high-

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mountain dwarf shrublands, chiefly with mountain pine of the variety *pumilio*.

In the frame of a wider survey of the entomocoenosis of the Park, made by one of us (A.B.B.), the opportunity was taken to deepen and collect the little and dispersal data about Neuropterida (Monserrat, 1980; Navás, 1913; Pantaleoni, 2005; Pantaleoni & Letardi, 1998) with the aim to realize a checklist of those insects of the Park territory and neighbourhoods.

Materials and methods

In order to produce a checklist of Neuropterida of the Majella National Park, the few bibliographic references have been collected and integrated with unpublished data of several public and private collections (collections of the University of Roma Tre; the Natural History Museum of Milan; the Natural History Museum of Venice; Civic Museum of Zoology of Rome; the Erdgenössische Technische Hochschule-Zen-trum, Zürich; Pantaleoni, pers. comm.; collection Terzani, Florence; collection Pessolano, Rome). Nevertheless, the majority of data has been collected during the surveys in the Park between 2001 and 2005, with several collecting methods (sweeping net, aerial trap, light trap, beating tray, and by rearing of the immature stages). Moreover, a specific survey has been conducted during the first three days of the Post IX International Symposium on Neuropterology long excursion by one of us (A. L.) together with four colleagues (Sergio De Freitas, John D. Oswald, Horst and Ulrike Aspöck) in several localities of the Park, collecting only with sweeping net.

In order to confront the checklist with the Neuropterofauna of the whole Abruzzo region, the basic information from the European monograph on Neuroptera has been used (Aspöck *et al.*, 1980), integrated with the following world monograph on Raphidioptera (Aspöck *et al.*, 1991), as result in the updated web resource on the Italian Neuropterida (http://neurotteri. casaccia.enea.it).

Numeric codes for genera and species have been derived from the project of the checklist of the Italian Fauna (http:// www. faunaitalia.it / checklist / introduction.html, see also [Bernardi] Iori *et al.*, 1995).

The systematic order used derives from the checklist of Italian Neuropterida ([Bernardi] Iori *et al.*, 1995) with few modifications; "*" symbol indicates species collected or cited in this area for the first time; "**" symbol indicates species new for Abruzzo; "***" symbol indicates species new for Italy; "?" symbol indicates determination which needs confirmation; "n" symbol indicates species collected near Park areas with similar ecological conditions.

Results

Checklist of Neuropterida of the Majella National Park

Megaloptera

Sialidae

001.0 *Sialis* Latreille, 1803
  002.0 * *lutaria* (Linné, 1758)

Raphidioptera

Raphidiidae

002.0 *Phaeostigma* Navás, 1909 subg. *Phaeostigma* Navás, 1909
  002.0 * *italogallica* (H. Aspöck & U. Aspöck, 1976)
  003.0 * *notata* (Fabricius, 1781) **?**
003.0 *Phaeostigma* Navás, 1909 subg. *Pontoraphidia* H. & U. Aspöck, 1968
  001.0 ** *grandii* (Principi, 1960)
007.0 *Ornatoraphidia* H. Aspöck & U. Aspöck, 1968
  001.0 *flavilabris* (Costa, 1855)
007.1 *Turcoraphidia* H. Aspöck & U. Aspöck, 1968
  001.0 *** *amara* (H. Aspöck & U. Aspöck, 1964)
008.0 *Xanthostigma* Navás, 1909
  002.0 ** *corsica* (Hagen, 1867)
012.0 *Venustoraphidia* H. Aspöck & U. Aspöck, 1968
  001.0 *nigricollis* (Albarda, 1891)

Inocelliidae

014.0 *Parainocellia* H. Aspöck & U. Aspöck, 1968 subg. *Parainocellia* H. Aspöck & U. Aspöck, 1968
  001.0 * *bicolor* (A.Costa, 1855)

Neuroptera

Coniopterygidae

017.0 *Helicoconis* Enderlein, 1905 subg. *Ohmopteryx* Kis, 1970
  001.0 * *pseudolutea* Ohm, 1965 **? n**
018.0 *Coniopteryx* Curtis, 1834 subg. *Coniopteryx* Curtis, 1834
  001.0 ** *borealis* Tjeder, 1930
  002.0 ** *pygmaea* Enderlein, 1906
020.0 *Coniopteryx* Curtis, 1834 subg. *Metaconiopteryx* Kis, Nagler & Mandru, 1970

001.0 *arcuata* Kis, 1965
024.0 *Semidalis* Enderlein, 1905
001.0 *aleyrodiformis* (Stephens, 1836)

Osmylidae

025.0 *Osmylus* Latreille, 1802
001.0 * *fulvicephalus* (Scopoli, 1763)

Mantispidae

029.0 *Mantispa* Illiger, 1798
001.0 * *styriaca* (Poda, 1761)
030.0 *Perlamantispa* Handschin, 1960
002.0 *perla* (Pallas, 1772) sensu Erichson, 1839

Hemerobiidae

032.0 *Hemerobius* Linné, 1758
004.0 * *gilvus* Stein, 1863
005.0 * *handschini* Tjeder, 1957
006.0 * *humulinus* Linné, 1758
009.0 ** *micans* Olivier, 1792
010.0 * *nitidulus* Fabricius, 1777
015.0 * *stigma* Stephens, 1836
033.0 *Wesmaelius* Krüger, 1922
010.0 ** *subnebulosus* (Stephens, 1836)
034.0 *Sympherobius* Banks, 1904
006.0 * *pellucidus* (Walker, 1853)
036.0 *Megalomus* Rambur, 1842
001.0 ** *hirtus* (Linné, 1761)
003.0 ** *tineoides* Rambur, 1842
004.0 *tortricoides* Rambur, 1842 **n**
038.0 *Micromus* Rambur, 1842
001.0 *angulatus* (Stephens, 1836) **?**
004.0 *variegatus* (Fabricius, 1793)

Chrysopidae

039.0 *Italochrysa* Principi, 1946
001.0 * *italica* (Rossi, 1790)
041.0 *Chrysopa* Leach, 1815
005.0 *pallens* (Rambur, 1838)
006.0 * *perla* (Linné, 1758) sensu Schneider, 1851
008.0 *viridana* Schneider, 1845
009.0 *walkeri* McLachlan, 1893
042.0 *Chrysoperla* Steinmann, 1964
001.0 gr. *carnea* (Stephens, 1836)
002.0 * *lucasina* (Lacroix, 1912)
003.0 ** *mediterranea* (Hölzel, 1972) **?**
004.0 ** *pallida* Henry et al., 2002
044.0 *Cunctochrysa* Hölzel, 1970
001.0 *albolineata* (Killington, 1935)
045.0 *Dichochrysa* Yang, 1991 (=*Mallada* Navás, 1925 partim)
001.1 ** *abdominalis* (Brauer, 1856)
002.0 *flavifrons* (Brauer, 1850)
007.0 * sp.pr. *picteti* (McLachlan, 1880)
008.0 *prasina* (Burmeister, 1839)
009.0 *ventralis* (Curtis, 1834)
011.0 *zelleri* (Schneider, 1851)
046.0 *Nineta* Navás, 1912
001.0 * *flava* (Scopoli, 1763)
002.0 * *principiae* Monserrat, 1980
003.0 * *inpunctata* (Reuter, 1894) **?**
047.0 *Peyerimhoffina* Lacroix, 1920
001.0 ** *gracilis* (Schneider, 1851) **n**
049.0 *Hypochrysa* Hagen, 1866
001.0 ** *elegans* (Burmeister, 1839)
050.0 *Nothochrysa* McLachlan, 1868
002.0 ** *capitata* (Fabricius, 1793)

Myrmeleontidae

051.0 *Palpares* Rambur, 1842
001.0 *libelluloides* (Linné, 1764)
054.0 *Myrmecaelurus* Costa, 1855 subg. *Myrmecaelurus* Costa, 1855
001.0 *trigrammus* (Pallas, 1781) **n**
057.0 *Myrmeleon* Linné, 1767 subg. *Myrmeleon* Linné, 1767
001.0 ** *formicarius* Linné, 1767
060.0 *Neuroleon* Navás, 1909
003.0 ** *microstenus* (McLachlan, 1898)
061.0 *Distoleon* Rambur, 1842
002.0 * *tetragrammicus* (Fabricius, 1798)

Ascalaphidae

069.0 *Libelloides* Tjeder, 1972
001.0 *coccajus* (Denis & Schiffermüller, 1775)
004.0 * *longicornis* (Linné, 1764)
006.0 *lacteus* (Brullé, 1832)

Discussion

According to the literature, in the area of the Majella National Park twenty species belonging to seven families of Neuropterida were recorded.

With the results of our study in this area, together with a study of some public and private collections, the Neuropterofauna of Majella rises to 59 species belonging to ten families. It represents more than 80% of the whole Neuropterofauna of Abruzzo: actually, according to our partially unpublished data, 70 species belonging to ten families inhabits the Abruzzo region.

The resulting Neuropterofauna is probably almost complete, taking into consideration the different environments in the territory of the Park. However, we consider that further research, also carried out with other techniques of collection (in particular with light traps), will increase the number of species, in particular within Coniopterygidae.

The Neuropterofauna of this area has been shown absolutely similar to analo-

gous Apennine areas, in particular to the ones of the other protected areas in Central Italy, with some faunistic peculiarity like the presence of the raphidiid *T. amara*, with a trans-adriatic distribution. Moreover, this area represents the northern boundary limit of *Phaeostigma grandii*, an endemic raphidiid of the Italian Peninsula.

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