

NEUROPTERIDA OF THE ABRUZZO NATIONAL PARK, ITALY

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A preliminary check list of Neuropterida of Abruzzo National Park, Italy, is presented. About 49 taxa of Megaloptera, Raphidioptera, and Neuroptera were detected within the Park and in the surrounding areas, although the identity of 13 of these requires confirmation. The material was collected during occasional research between 1997 and 1999. A review of publications with distributional data is included.

Key words: Abruzzo National Park, Megaloptera, Raphidioptera, Neuroptera, Italy

INTRODUCTION

Dr. F. TASSI (Abruzzo National Park) started Biodiversity Project in 1993. This project is one of the new lines of conservation activity, environmental education and scientific research of the Abruzzo National Park and its satellite organizations, and in particular of the Apennine Centre for Ecological Research and of the National Parks Committee. Biodiversity Project sets itself a series of multiple aims:

I. Promoting in-depth studies and knowledge of the richness, variety and status of the fauna and flora of the Park, of the Central Apennine system of protected areas and, in a wider perspective, of the rest of Italy, with special reference to the National Parks and Equivalent Reserves.

II. Developing the most effective methods of communication, expression and information to enhance public knowledge, perception and participation in conservation activities.

III. Identifying priorities, strategies and tactics, and therefore the most appropriate policies, for full attainment of the fundamental aims of conservation.

More than 7 000 different animal and plant species have been recorded in the Abruzzo National Park and in its Buffer Area to date.

Biodiversity Project pursues its objectives through the most varied actions. One of these is the compilation of lists (Red List, Check List, other historical and/or updated lists) of the living organisms of well-defined geographical zones.

ABRUZZO NATIONAL PARK

The Abruzzo National Park, consisting of 50 000 hectares (plus 60 000 hectares of buffer zone), is situated at the heart of the central Apennines, spanning Abruzzo, Lazio and Molise, and equidistant from the Adriatic and the Tyrennian seas.

The Park covers three provinces (Aquila, Frosinone and Isernia), and twenty-two municipalities, and includes five distinct geographical areas: Alto Sangro, Marsica Fucenese and the Peligna valley in Abruzzo; the Comino valley in Lazio; the Mainarde in Molise.

The Park is principally made up of several mountain chains, rising from an altitude of 900 to 2 000 metres a.s.l. The landscape is varied and interesting, alternating between rolling hilltops, typical of the Apennines, to precipitous alpine slopes.

The Sangro river runs through the centre of the Park, and has several streams running into it, whilst the waters of the Giovenco, Melfa, Volturno and other rivers flow through the external part of the Park. Because of the karst phenomenon, rivers often flow through underground beds and rise to the surface in the valleys, sometimes outside the territory of the Park.

Inside the protected area there is only one small natural basin at high altitude. This is Lake Vivo, fed partly by its own springs and partly by melted snow.

The Park's territory was formed in the past by the phenomena of glaciers and karst, or rough limestone. Today we can see evidence of this in the glacial circles found in the high parts of the valleys, and morainic deposits and jagged rocks on the valley floors. The karst phenomenon can be seen by the presence of caves, fissures, holes and other similar features.

The rocks in the park are calcareous; clayey and sandy soils can be found only in the lower parts of some valleys. The mountain chain of Camosciara is typical of the region, which also comprises dolomitic limestone. The impermeable rocks cause the water to flow along the surface, and as a result we can find torrents which form picturesque waterfalls and pools.

CHECKLIST OF NEUROPTERIDA OF ABRUZZO NATIONAL PARK

MEGALOPTERA

Sialidae

Sialis fuliginosa PICTET, 1836

Sialis lutaria (LINNÉ, 1758)

Sialis nigripes PICTET, 1865

RAPHIDOPTERA

Raphidiidae

Phaeostigma galloitalica (H. ASPÖCK et U. ASPÖCK, 1976)

Ornatoraphidia flavilabris (COSTA, 1855)

Inocelliidae

* *Parainocellia bicolor* (A. COSTA, 1855)

NEUROPTERA

Coniopterygidae

* *Helicoconis pseudolutea* OHM, 1965

* *Coniopteryx tineiformis* CURTIS, 1834

Coniopteryx arcuata Kis, 1965 ?

* *Coniopteryx esbenpeterseni* TJEDER, 1930

Coniopteryx lentiae H. ASPÖCK et U. ASPÖCK, 1964 ?

Semidalis aleyrodiformis (STEPHENS, 1836)

Mantispidae

Mantispa styriaca (PODA, 1761) ?

Perlamantispa perla (PALLAS, 1772) sensu ERICHSON, 1839 ?

Hemerobiidae

* *Hemerobius gilvus* STEIN, 1863

* *Hemerobius handschini* TJEDER, 1957

Hemerobius humulinus LINNÉ, 1758 ?

* *Hemerobius micans* OLIVIER, 1792

Hemerobius nitidulus FABRICIUS, 1777

* *Hemerobius stigma* STEPHENS, 1836

Wesmaelius tjederi (KIMMINS, 1963) ?

Megalomus hirtus (LINNÉ, 1761) ?

Megalomus pyraloides RAMBUR, 1842 ?

Megalomus tineoides RAMBUR, 1842 ?

* *Megalomus tortricoides* RAMBUR, 1842

* *Micromus paganus* (LINNÉ, 1767)

Chrysopidae

Chrysopa dorsalis BURMEISTER, 1839

Chrysopa pallens (RAMBUR, 1838)

Chrysopa perla (LINNÉ, 1758) sensu SCHNEIDER, 1851

Chrysopa viridana SCHNEIDER, 1845 ?

Chrysopa walkeri McLACHLAN, 1893

Chrysoperla carnea s.l. (STEPHENS, 1836)

* *Chrysoperla lucasina* (LACROIX, 1912)

* *Chrysoperla* «slow motorboat» sensu HENRY

* *Chrysopidia ciliata* (WESMAEL, 1841)

Cunctochrysa albolineata (KILLINGTON, 1935)

Cunctochrysa baetica HÖLZEL, 1972 ?

Dichochrysa flavifrons (BRAUER, 1850)

Dichochrysa sp.pr. *picteti* (MCLACHLAN, 1880)

Dichochrysa prasina (BURMEISTER, 1839)

Dichochrysa ventralis (CURTIS, 1834)

Nineta flava (SCOPOLI, 1763)

* *Hypochrysa elegans* (BURMEISTER, 1839)

Myrmeleontidae

Acanthaclisis occitanica (VILLERS, 1789) ?

* *Myrmeleon formicarius* LINNÉ, 1767

Ascalaphidae

Libelloides coccajus (DENIS et SCHIFFERMÜLLER, 1775)

Libelloides italicus (FABRICIUS, 1781) ?

Libelloides longicornis (LINNÉ, 1764)

Libelloides ottomanus (GERMAR, 1817)

The systematic order used derives from the checklist of Italian Neuropterida (BERNARDI *et al.* 1995) with few modifications; “*” symbol indicates species collected in this area for the first time; “?” symbol indicates determination which needs confirmation.

DISCUSSION

With the exception of a scientific surveying lead from the Institute of Entomology of Bologna (GRANDI 1958; PRINCIPI 1958b), no other specific study on the Neuropterida has been realized in the territory of the Park until today. In that previous study, 13 species were reported, pertaining to the families Chrysopidae, Hemerobiidae and Ascalaphidae.

In numerous other papers (NAVAS 1928, CASTELLANI 1957, PRINCIPI 1958a, 1977, INSOM *et al.* 1979, 1985, AISTLEITNER 1980, ASPÖCK *et al.* 1980, 1991, LETARDI 1991, 1994, ZUPPA 1994, LETARDI & PANTALEONI 1996, PANTALEONI & LETARDI 1998) several faunistic reports concerning Neuropterida in the territory of the Park have been published. In three years, from 1997 to 1999, a series of collections of Neuropterida have been made, using a sweep net, in several areas of the Park at different periods during the year, with the aim of updating the “Check List of the living organisms” previewed in the Biodiversity Project of the Park.

Based on such studies, at the moment 49 taxa comprising 9 families (Sialidae, Raphidiidae, Inocelliidae, Coniopterygidae, Mantispidae, Hemerobiidae, Chrysopidae, Myrmeleontidae, and Ascalaphidae) are reported in the checklist; 13 of these are reported as “uncertain” for various reasons. In particular, records of *Coniopteryx arcuata*, *C. lentiae*, *Hemerobius humulinus*, *Wesmaelius tjederi*, *Megalomus hirtus*, *M. pyraloides*, *M. tineoides*, *Chrysopa viridana*, *Cunctochrysa baetica*, and *Libelloides italicus* are based on bibliographical references with indica-

tion of locality not attributable with absolute certainty to the territory of the Park. For Mantispidae, a reliable visual report exists (PACE pers. comm.) which does not allow for an undoubtful species attribution (both *Mantispa styriaca* and *Perla-mantispa perla* are quite common in different areas of Abruzzo with similar environmental conditions which can be found in the Park). Finally, the report of *Acanthaclisis occitanica* for the Park is based on a specimen preserved in a reliable collection, but the ecological requirements of such species are not compatible with present environments in the Park.

The resulting Neuropterofauna is probably complete enough, taking into consideration the different environments in the territory of the Park. However, we can not exclude the possibility that further research, carried out with other techniques of collection (in particular with light traps), will increase the number of both species and families, in particular within Coniopterygidae and Hemerobiidae.

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