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## A first contribution to the lichen flora of Abruzzi (C. Italy)

### Abstract

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A list of 32 lichens new to Abruzzi is reported. The list was made by comparing the identifications of the specimens present in the herbarium kept at the Ecological Service of the Provincial Administration of Pescara with the Italian lichen check-list proposed by Nimis (1993). For each species both geographical and ecological data are included.

### Introduction

Within the frame of the renewed and steadily growing interest in the Italian lichen flora over the past few years, Nimis (1993) highlighted that the Adriatic slope of the peninsula is one of the least studied in Italy. The region Abruzzi, notwithstanding its great interest from a lichenological point of view due to the presence of the highest peaks of the Apennines (Gran Sasso and Maiella), is still poorly investigated and only 335 species have been recorded so far (Nimis 1993).

Historically, the golden age of Abruzzi lichenology spans over a period going from about 1850 to the early 1900. One of the earliest contributions goes back to Tenore (1829), who made a list of 15 species. A few years later, Rabenhorst (1850) visited several parts of the region listing many species. Subsequently, Cesati (1873) investigated the Maiella massif, finding 83 species and 5 varieties. Then, Jatta (1874, 1877, 1889) gave a major contribution reporting most of the species known from Abruzzi, recorded from its highest peaks. Also Arcangeli (1887) and Baroni (1889) published short lists of species collected during their excursions on the Apennines of Abruzzi.

After the conclusion of "the golden age" (Nimis 1988) of Italian lichenology, there followed a phase characterized by few and sporadic contributions. Anzalone & Bazzichelli (1960), listed some 20 species from the Abruzzi National Park and Grillo & Romano (1987), from the same area, reported 150 species, 48 of which new to the region. A few other species are reported in studies on lichens used as bioindicators, Recchia & Polidoro (1988), Recchia & al. (1991) and Recchia & al. (1993). Finally, Nimis & Tretiach (1993) presented a list of 13 species new to Abruzzi. The present first contribution aims at starting a series of studies on the lichen flora from Abruzzi.

## Environment

The territory of Abruzzi includes different geographical areas which extend from the Adriatic coastal zones to the mountainous peaks of the Appennines. The geological substrate of the mountain ranges is mostly calcareous and dolomitic. The geological features of the hill area sloping down from the mountains are mostly referable to argillaceous, sandy and arenaceous formations. The peaks of the mountain ranges reach rather high altitudes. Among these Corno Grande (Gran Sasso, 2912 m) and Mount Amaro (Maiella, 2793 m) are the highest. Because of the geomorphologic features, the climate diversifications, colder on the highest elevations, Mediterranean along the coastal strip and in some inland areas, in the region there is a variety of vegetational aspects. Apart from a few areas with small stands of mountain pine and dwarf juniper, the treeline reaches the height of 1880 m. Below this limit beechwoods dominate, being the most important and widespread tree formations. In more xerophilous areas of the submontane horizon, there are irregularly distributed formations of *Quercus pubescens*, in addition to scrubs with *Ostrya carpinifolia* and *Fraxinus ornus*. In even drier zones, the vegetation is characterized by the presence of entities of the *Quercion ilicis*, with dominance of holm oak (*Quercus ilex*).

## Data and methods

A list of 32 species as yet unrecorded in Abruzzi is proposed. The list was made by comparing our identifications with the Italian check-list by Nimis (1993). For each species the geographical and ecological data of the collecting-sites are reported. The samples were collected during visits to various zones of the region, so they are not the result of the floristic study of limited areas. The material was determined in the laboratory of ecology of the Province of Pescara and in the botanic laboratory of the Department of Environmental Sciences of the University of L'Aquila. The species marked with \* were determined by P. L. Nimis (Trieste), who also confirmed the identification of all other specimens. All the collected material is stored at the Ecological Service of the Provincial Administration of Pescara. The nomenclature follows, as far as possible, Nimis (1993).

## Floristic list

*Aspicilia cheresina* (Mull. Arg.) Hue \*

Corno Grande, Gran Sasso, L'Aquila, alt. 2400 m, on calcareous rocks;

*Buellia venusta* (Körb.) Lett. \*

Corno Grande, Gran Sasso, L'Aquila, alt. 2200 m, on calcareous rocks;

*Caloplaca biatorina* (Massal.) Steiner \*

Corno Grande, Gran Sasso, L'Aquila, alt. 2400 m, on calcareous rocks;

*Caloplaca coccinea* (Müll.Arg.) Poelt \*

Corno Grande, Gran Sasso, L'Aquila; alt. 2400 m, on calcareous rocks;

- Caloplaca nubigena* var. *keissleri* (Krempelh.) Dalla Torre & Sarnth \*  
Corno Grande, Gran Sasso, L'Aquila, alt. 2400 m, on calcareous rocks;
- Candelariella reflexa* (Nyl.) Lettau  
Osservanza, M. Morrone, Tocco da Casauria (PE), alt. 370 m, on pubescent oak bark;
- Cetrelia olivetorum* (Nyl.) W. Culb. & C. Culb.  
Impianezza, M. Morrone, Popoli (PE), alt. 630 m, on pubescent oak bark;
- Cladonia coniocraea* auct.  
Cannadina, Brittoli (PE), alt. 1200 m, on a beech stump;
- Cladonia symphycarpa* (Flörke) Fr.  
Vallone S. Spirito, Fara San Martino (CH), alt. 1650 m, on dry calcareous soil;
- Cladonia subrangiformis* Sandst.  
Forca di Penne, Capestrano (AQ), alt. 1200 m, on soil;
- Evernia divaricata* (L.) Ach.  
Terraegna, Bisegna (AQ), alt. 1740 m, on beech bark;
- Lecanora albescens* (Hoffm.) Branth. & Rostr.  
Brittoli (PE), alt. 628 m, on pubescent oak bark;
- Lecanora umbrina* (Ach.) Massal.  
Impianezza, Popoli (PE), alt. 630 m, on pubescent oak bark;
- Lecidea botryosa* (Fr.) Th. Fr.  
Madonna del Monte, Bolognano (PE), alt. 330 m, on pubescent oak bark;
- Lecidea lapicida* (Ach.) Ach. \*  
Monte Picca, Forca di Penne, Capestrano (AQ), alt. 1400 m, on a calcareous rocks with decalcified surface;
- Leptogium brebissonii* Mont.  
Valle dell'Orfento, Caramanico Terme (PE), alt. 570 m, on eutrophic sandstone;
- Leptogium corticola* (Taylor) Tuck.  
La fossa, Corfinio (AQ), alt. 900 m, on moss;
- Parmelia borrieri* (Sm.) Turner  
Osservanza, M. Morrone, Tocco da Casauria (PE), alt. 335 m, on pubescent oak bark;
- Parmelia carporrhizans* Taylor  
Cerro, Popoli (PE), alt. 350 m, on pubescent oak bark;
- Parmelia pulla* Ach.  
M. Picca, Forca di Penne, Capestrano (AQ), alt. 1405 m, on rock

***Parmelia soredians*** Nyl.

Impianezza, Popoli (PE), alt. 630 m, on pubescent oak bark;

***Parmelia subaurifera*** Nyl.

Bosco di Sant'Antonio, Pescocostanzo (AQ), alt. 1340 m, on beech bark;

***Peltigera leucophlebia*** (Nyl.) Gyelnik

Vallone S. Spirito, Fara San Martino (CH), alt. 1100 m, on calcareous rock mixed with earth;

***Peltigera neckeri*** Mull. Arg.

Valle dell'Orfento, Caramanico Terme (PE), alt. 530 m, on moss;

***Phaeophyscia poeltii*** (Frey) Nimis

Bussi sul Tirino (PE), alt. 350 m, on pubescent oak bark;

***Physconia detersa*** (Nyl.) Poelt

S. Benedetto in Perillis (AQ), alt. 930 m, on pubescent oak bark;

***Polyblastia ventosa*** Arnold \*

Corno Grande, Gran Sasso, L'Aquila, alt. 2400 m, on calcareous rocks;

***Polyblastia fuscoargillacea*** Anzi \*

Corno Grande, Gran Sasso, L'Aquila, alt. 2400 m, on calcareous rocks;

***Psora testacea*** Hoffm. \*

Svolte di Popoli, Popoli (PE), alt. 420 m, on soil;

***Rhizocarpon obscuratum*** (Ach.) Massal. \*

M. Picca, Forca di Penne, Capestrano (AQ), alt. 1405 m, on calcareous rock with decalcified surface;

***Rinodina pyrina*** (Ach.) Arnold

Viale G. D'Annunzio, Pescara, alt. 0 m, on lime bark;

***Xanthoria sorediata*** (Vainio) Poelt

Corno Grande, Gran Sasso, L'Aquila, alt. 2400 m, on calcareous rocks.

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