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**The Orthopteroid insects of the Abruzzo,
Lazio and Molise National Park and surrounding localities
(Central Apennine, S Italy)**
(Blattaria, Mantodea, Orthoptera, Phasmatodea, Dermaptera)

Abstract - The Abruzzo, Lazio and Molise National Park (PNALM), established as a private institution in 1922 and recognised by a State law in 1923, is the oldest Italian Protected Area and extends over 50,000 hectares on Abruzzo, Latium and Molise regions. The territory is mountainous, main peaks being Mt Greco (2,285 m), Mt Petroso (2,249 m), Mt Marsicano (2,245 m) and Mt La Meta (2,242 m). During the glacial ages, glaciers covered much of this area and the flora and fauna remained isolated, differentiating from other Italian areas. Consequently, many Apennine species are endemic to a single mountain. Another interesting aspect of the Central Apennine is the presence of xerothermic areas on high altitude, where xerophilous species live not far from orophilous ones. This aspect makes the fauna and flora of Central Apennine very rich and peculiar. In the past, the PNALM has been studied by several orthopterologists (Capra, Baccetti and La Greca). Recently new field researches have been carried out by Centro Studi Ecologici Appenninici of the PNALM, in co-operation with the Dipartimento di Agronomia Ambientale e Produzioni Vegetali (Entomologia) of the University of Padua, Italy and the Dipartimento di Biologia Animale e dell'Uomo, University of Rome "La Sapienza", Italy. On the basis of the available literature and of new field data, it has been possible to update a checklist. The number of taxa till now recorded for the PNALM and contiguous localities is 84: 5 Blattaria, 1 Mantodea, 68 Orthoptera, 2 Phasmatodea and 8 Dermaptera. The most interesting taxa are *Capraiellus tamaninii*, *Ectobius caprai* (Blattodea), *Barbitistes yersini*, *Tettigonia cantans*, *Decticus aprutianus*, *Bicolorana bicolor bicolor*, *Saga pedo*, *Ephippiger cavannai*, *Ephippiger ruffoi*, *Italopodisma acuminata acuminata*, *I. a. marsicana*, *I. trapezoidalis trapezoidalis*, *I. t. aprutiana*, *Aeropus sibiricus sibiricus*, *Chorthippus bruttius*, *Italohippus monticola* (Orthoptera), *Bacillus rossius rossius*, *Clonopsis gallica* (Phasmatodea), *Pseudochelidura orsinii*, *Forficula silana* (Dermaptera). For each taxon the list of known localities and ecological and biogeographical remarks concerning the investigated area are presented. The synonymy of *Forficula abrutiana* Borelli, 1916 with *F. auricularia* Linnaeus 1758 is confirmed. In addition, in the discussion of the distribution of *Forficula pubescens* Serville, 1839, the absence of *Forficula lesnei* Finot, 1887 from Sardinia, where has been recently recorded, is also discussed.

Riassunto - *Gli Insetti Ortoteroidi del Parco Nazionale d'Abruzzo, Lazio e Molise e località limitrofe (Appennino centrale, sud Italia) (Blattaria, Mantodea, Orthoptera, Phasmatodea, Dermaptera).*

Il Parco Nazionale d'Abruzzo, Lazio e Molise (PNALM), istituito come ente privato nel 1922 e riconosciuto da una legge statale nel 1923, è la più antica Area Protetta italiana e si estende su 50.000 ettari sulle regioni Abruzzo, Lazio e Molise. Il territorio è montagnoso, i rilievi principali sono il Monte Greco (2.285 m), Monte Petroso (2.249 m), Monte Marsicano (2.245 m) e Monte La Meta (2.242 m). Durante le ere glaciali, i ghiacciai coprivano gran parte di quest'area, quindi la flora e la fauna rimasero isolate, differenziandosi dalle altre zone italiane. Di conseguenza molte specie Appennine sono endemiche di una sola montagna. Un altro aspetto interessante dell'Appennino Centrale è la presenza di aree xerotermitiche a quote elevate, dove specie xerofile vivono non lontano da altre orofile. Questo aspetto rende la flora e la fauna dell'Appennino Centrale molto ricca e peculiare. In passato, il PNALM è stato studiato da molti

ortotterologi (Capra, Baccetti e La Greca). Recentemente nuove ricerche di campo sono state eseguite dal Centro Studi Ecologici Appenninici del Parco Nazionale d'Abruzzo Lazio e Molise in collaborazione col Dipartimento di Agronomia Ambientale e Produzioni Vegetali (Entomologia) dell'Università di Padova e il Dipartimento di Biologia Animale e dell'Uomo, Univ. di Roma "La Sapienza". Sulla base della letteratura disponibile e di nuovi dati di campo, è stato possibile aggiornare una checklist. Il numero di taxa finora rinvenuti nel parco e nelle zone contigue è 84: 5 Blattaria, 1 Mantodea, 68 Orthoptera, 2 Phasmatodea e 8 Dermaptera. Le specie più interessanti sono *Capraiellus tamaninii*, *Ectobius caprai* (Blattodea), *Barbitistes yersini*, *Tettigonia cantans*, *Decticus aprutianus*, *Bicolorana bicolor bicolor*, *Saga pedo*, *Ephippiger cavannai*, *Ephippiger ruffoi*, *Italopodisma acuminata acuminata*, *I. a. marsicana*, *I. trapezoidalis trapezoidalis*, *I. t. aprutiana*, *Aeropus sibiricus sibiricus*, *Chorthippus brutius*, *Italohippus monticola* (Orthoptera), *Bacillus rossius rossius*, *Clonopsis gallica* (Phasmatodea), *Pseudochelidura orsinii*, *Forficula silana* (Dermaptera). Per ogni taxon viene fornito l'elenco delle località finora note e alcune osservazioni ecologiche e biogeografiche relative all'area del Parco. Viene inoltre definitivamente confermata la sinonimia di *Forficula abrutiana* Borelli, 1916 con *F. auricularia* Linnaeus 1758. In aggiunta, trattando la distribuzione di *Forficula pubescens* Serville, 1839 viene discussa l'assenza di *Forficula lesnei* Finot, 1887 dalla Sardegna, per cui è stata recentemente segnalata.

Key words: Orthopteroidea, faunistic, protected area, endemic taxa, Italy.

INTRODUCTION

In the past, orthoptero fauna of the Abruzzo, Lazio and Molise National Park (PNAML) has been studied by several entomologists (E. Giglio-Tos, F. Capra, A. Borelli, M. La Greca, A. Galvagni, R. Ebner, B. Baccetti, A. Vigna Taglianti and G. Osella). Though some of them published data on the Park within works not specifically concerning this area, all the information on Orthopteroid insects of the PNALM are scattered in many papers, difficult to consult. Only Marcello La Greca, in collaboration with A. Messina, published a paper putting together the results obtained during years of field researches (La Greca & Messina, 1982); most of the specimens concerned are preserved in the La Greca Collection (Museo Civico di Storia Naturale of Milan), one of the largest collections of Orthopteroidea of Abruzzo, Lazio and Molise National Park.

Recently new field researches have been carried out by the Servizio Scientifico (previously Centro Studi Ecologici Appenninici) of the PNALM in co-operation with the Dipartimento di Agronomia Ambientale e Produzioni Vegetali (Entomologia) of the University of Padua, Italy and the Dipartimento di Biologia Animale e dell'Uomo, University "La Sapienza" of Rome, Italy. On the basis of the available literature and of new field data, it has been possible to update the previously available checklist (Fontana et al., 2001). Presently, the number of species recorded for the PNALM and surrounding localities is 84, namely 5 Blattaria, 1 Mantodea, 68 Orthoptera, 2 Phasmatodea and 8 Dermaptera. We report here this list, following nomenclature and systematic adopted by Failla et al. (1994); family taxonomy of Orthoptera follows Fontana et al. (2002).



Fig. 1. PNALM general map (from the courtesy of Ente Autonomo Parco Nazionale d'Abruzzo, Lazio e Molise).

PRELIMINARY CHECKLIST FOR PNALM AND SURROUNDING LOCALITIES

BLATTARIA

Fam. Blattidae

- Capraiellus tamaninii* Galvagni, 1972
Ectobius caprai Galvagni, 1971
Ectobius montanus (A. Costa, 1866)
Ectobius sylvestris (Poda, 1761)
Phyllodromica marginata (Schreber, 1781)

MANTODEA

Fam. Mantidae

- Mantis religiosa religiosa* Linnaeus, 1758

ORTHOPTERA

Fam. Phaneropteridae

- Tylopsis liliifolia* (Fabricius, 1793)
Barbitistes alpinus Fruhstorfer, 1921
Barbitistes yersini Brunner, 1878
Leptophyes laticauda (Frivaldsky, 1867)
Leptophyes punctatissima (Bosc, 1792)
Poecilimon superbus (Fischer, 1854)

Fam. Meconematidae

- Meconema meridionale* A. Costa, 1860
Meconema thalassinum (De Geer, 1773)

Fam. Conocephalidae

- Xiphidion discolor discolor* (Thunberg, 1815)

Fam. Tettigoniidae

- Tettigonia cantans* (Fuessly, 1775)
Tettigonia viridissima Linnaeus, 1758
Decticus albifrons (Fabricius, 1775)
Decticus aprutianus Capra, 1936
Decticus verrucivorus verrucivorus Linnaeus, 1758
Platycleis grisea grisea (Fabricius, 1781)
Tessellana tessellata tessellata (Charpentier, 1825)
Bicolorana bicolor bicolor (Philippi, 1830)

Sepiana sepium (Yersin, 1854)
Pholidoptera fallax (Fischer, 1854)
Pholidoptera griseoptera (De Geer, 1775)
Eupholidoptera chabrieri chabrieri (Charpentier, 1825)
Yersinella raymondi (Yersin, 1860)
Rhacocleis germanica (Herrich-Schaeffer, 1840)
Saga pedo (Pallas, 1771)

Fam. Bradyporidae

Ephippiger cavannai (Targioni Tozzetti, 1881)
Ephippiger ruffoi Galvagni, 1955

Fam. Rhabdiphoridae

Dolichopoda geniculata (A. Costa, 1860)

Fam. Gryllidae

Gryllus campestris Linnaeus, 1758
Gryllus bimaculatus De Geer, 1773
Eumodicogryllus burdigalensis burdigalensis (Latreille, 1804)
Pteronemobius concolor (Walker, 1871)
Oecanthus pellucens pellucens (Scopoli, 1763)

Fam. Mogoplistidae

Mogoplistes brunneus Serville, 1839

Fam. Gryllotalpidae

Gryllotalpa gryllotalpa (Linnaeus, 1758)

Fam. Tetrigidae

Paratettix meridionalis (Rambur, 1838)
Uvarovitettix depressus (Brisout, 1848)
Tetrix bipunctata kraussi (Saulcy, 1888)
Tetrix subulata (Linnaeus, 1758)

Fam. Acrididae

Italopodisma acuminata acuminata (La Greca, 1969)
Italopodisma acuminata marsicana (La Greca, 1969)
Italopodisma fiscellana (La Greca, 1954)
Italopodisma trapezoidalis aprutiana (La Greca, 1969)
Italopodisma trapezoidalis trapezoidalis (La Greca, 1969)

Pezotettix giornai (Rossi, 1794)
Calliptamus italicus italicus (Linnaeus, 1758)
Calliptamus siciliae Ramme, 1927
Locusta migratoria cinerascens Fabricius, 1781
Oedipoda caerulea caerulea (Linnaeus, 1758)
Oedipoda germanica (Latreille, 1804)
Aiolopus strepens strepens (Latreille, 1804)
Omocestus rufipes (Zetterstedt, 1821)
Dirshius haemorrhoidalis haemorrhoidalis (Charpentier, 1825)
Dirshius petraeus (Brisout, 1855)
Stenobothrus apenninus Ebner, 1915
Stenobothrus lineatus lineatus (Panzer, 1796)
Stenobothrus nigromaculatus nigromaculatus (Herrich-Schaeffer, 1840)
Aeropus sibiricus sibiricus (Linnaeus, 1758)
Gomphocerus rufus (Linnaeus, 1758)
Myrmeleotettix maculatus maculatus (Thunberg, 1815)
Stauroderus scalaris scalaris (Fischer Waldheim, 1846)
Chorthippus bruttius Fontana & La Greca, 1999
Chorthippus dorsatus dorsatus (Zetterstedt, 1821)
Chorthippus parallelus parallelus (Zetterstedt, 1821)
Italohippus monticola Ebner, 1915
Glyptobothrus brunneus brunneus (Thunberg, 1815)
Glyptobothrus rubratibialis Schmidt, 1978
Glyptobothrus vagans vagans (Eversmann, 1848)
Euchorthippus declivus (Brisout, 1848)

PHASMATODEA

Fam. Bacillidae

Bacillus rossius rossius (Rossi, 1788)
Clonopsis gallica (Charpentier, 1825)

DERMAPTERA

Fam. Labiidae

Labia minor (Linnaeus, 1758)

Fam. Forficulidae

Pseudocheilidura orsinii (Gené, 1833)
Apterygida albipennis (Megerle in Charpentier, 1825)
Forficula auricularia Linnaeus, 1758
Forficula decipiens Gené, 1832

Forficula obtusangula Krauss, 1904

Forficula pubescens Gené, 1832

Forficula silana Costa, 1881

DISCUSSION ON THE SPECIES

For each taxon the available data are listed in a table reporting the following information:

FIRST COLUMN: Locality recorded in the specimens collected or drawn from literature (localities are listed in alphabetic order).

SECOND COLUMN: altitude in meters (if available).

THIRD COLUMN: region.

FOURTH COLUMN: province.

FIFTH COLUMN: data origin (collection, literature, etc.) abbreviated as below:

COLLECTION:

BO = Bartolomeo Giuseppe Osella (L'Aquila);

IEB = Istituto di Entomologia dell'Università di Bologna (coll. Menozzi);

LG = M. La Greca (Museo civico di Storia Naturale, Milan);

MZUF = Museo zoologico "La Specola" dell'Università, Florence;

MVE = Museo civico di Storia naturale, Venice;

MVR = Museo civico di Storia naturale, Verona;

MZUR = Museo di Zoologia dell'Università di Roma "La Sapienza";

PF = P. Fontana (Isola Vicentina);

PNA = Centro Studi Appenninici of Abruzzo, Lazio and Molise National Park (Pescasseroli);

PT = P. Tollis (Alfedena);

VT = A. Vigna Taglianti (Rome).

LITERATURE:

Bacc58 = Baccetti, 1958;

Bacc59b = Baccetti, 1959b;

Bacc63 = Baccetti, 1963;

Bacc91 = Baccetti, 1991;

BaCa59 = Baccetti & Capra, 1959;

BaCa69 = Baccetti & Capra, 1969;

Bor16 = Borelli, 1916;

Capr36 = Capra, 1936;

Ebn15 = Ebner, 1915;

Galv68 = Galvagni, 1968;

Galv71 = Galvagni, 1971;

Galv73 = Galvagni, 1973;

Gtos15 = Giglio Tos, 1915;

LaGr69 = La Greca, 1969;

LaGrMe82 = La Greca & Messina, 1982;

LaGrAl97 = La Greca et al., 1997;

LaOs94 = Laurenzi & Osella, 1994;

Macc33 = Maccagno, 1933;

Mas99 = Massa, 1999

Stei79 = Steinmann, 1979;

VTA99 = Vigna Taglianti, 1999;

VTAip = Vigna Taglianti, in press.

Data with generic locality "Abruzzo National Park", like those recorded by Grandi (1958) are listed only when they are the only available ones.

For each species general distribution and ecological, biogeographical and, in some cases, taxonomical remarks are presented. General distribution, if not differently stated, has been drawn from Fontana et al. (2002).

Ord. BLATTARIA

Fam. Blattidae

Capraiellus tamaninii Galvagni, 1972

AVAILABLE DATA

Piane d' Avegno, Roccaraso	1550	Abr	AQ	PF
Scanno, Frattura, M. Genzana	1400	Abr	AQ	PF

GENERAL DISTRIBUTION. Italian Peninsula, Sicily and Balkanic peninsula to the Peloponnesos.

ECOLOGY AND REMARKS. Lives on trees and bushes from the submontane to the montane level (Fontana et al., 2002).

Ectobius caprai Galvagni, 1971

AVAILABLE DATA

Piane d' Avegno, Roccaraso	1550	Abr	AQ	PF
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GENERAL DISTRIBUTION. Apennine endemic species, present in central and S Italy.

ECOLOGY AND REMARKS. Alpine to sub-alpine species (rarely montane), it lives on dense and high grasses of pastures.

Ectobius montanus (A. Costa, 1866)

AVAILABLE DATA

Forca d' Acero	1500	Abr	AQ	PF
M. Greco, Toppe del Tesoro	2100	Abr	AQ	PF
Monte delle Vitelle, Pescasseroli	1800	Abr	AQ	PF
Passo di Godi, Fonte Pantano		Abr	AQ	PF
Piane d' Avegno, Roccaraso	1550	Abr	AQ	PF
Scanno, Frattura, M. Ganzana	1400	Abr	AQ	PF
Val di Corte	1400	Abr		PF

GENERAL DISTRIBUTION. Apennine endemic species, distributed from Emilia Romagna region to Southern Italy.

ECOLOGY AND REMARKS. Montane to alpine species, it lives on grasses in alpine pastures or in the underwood. (Andreotti & Osella, 2001)

Ectobius sylvestris (Poda, 1761)

AVAILABLE DATA

Le Forme	1500	Mol	IS	PF
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GENERAL DISTRIBUTION. Widespread in Europe, from Scandinavia to S Italy (Calabria region) and Balkanic peninsula.

ECOLOGY AND REMARKS. Montane species, very common in Alpine beech woods; in Apennines it is scattered and present only in fresh and montane woods.

Phyllodromica marginata (Schreber, 1781)

AVAILABLE DATA

Lago di Castel San Vincenzo	700	Mol	IS	PF
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GENERAL DISTRIBUTION. Eastern European species, distributed from S Russia to Italy, where it is common in the Central and Southern peninsula and in Sardinia and Sicily islands.

ECOLOGY AND REMARKS. Termophilous species, it lives in dry underwoods or meadows often with large populations.

Ord. MANTODEA

Fam. Mantidae

Mantis religiosa religiosa Linnaeus, 1758

AVAILABLE DATA

Lago di Castel San Vincenzo	700	Mol	IS	PF
Villetta Barrea	990	Abr	AQ	PF

GENERAL DISTRIBUTION. Widely distributed in S Europe, N and Central Africa and Middle Asia.

ECOLOGY AND REMARKS. It is the only mantid species up till now found in the PNALM, where it lives in warm and sunny habitats.

Ord. ORTHOPTERA

Fam. Phaneropteridae

Tylopsis liliifolia (Fabricius, 1793)

AVAILABLE DATA

Gioia Vecchio	1250	Abr	AQ	LG
Colle della Croce, Barrea	1150	Abr	AQ	PF
Lago Castel S. Vincenzo	700	Mol	IS	PF
Lago di Barrea Nord	971	Abr	AQ	PF
Lago Montagna Spaccata	1050	Abr	AQ	PT

GENERAL DISTRIBUTION. Widespread from S Europe and N Africa to S Russia. In Italy is present along all the peninsula, in Sardinia and Sicily islands.

ECOLOGY AND REMARKS. Xerothermophilous species living in grasslands, not on bushes or trees (Fontana et al., 2002).

Barbitistes alpinus Fruhstorfer, 1921

AVAILABLE DATA

Pescasseroli	1400	Abr	AQ	LG
Sorgenti del Fondillo	1400	Abr	AQ	LG; LaGrMe82

GENERAL DISTRIBUTION. *Barbitistes alpinus* is present in the Alps and in particular in S-Eern France, in S Switzerland and in Italy, from the Alps to Central Apennine.

ECOLOGY AND REMARKS. Montane species living on trees, bushes and herbs (Fontana et al., 2002). Fontana & Buzzetti (this volume) consider *Barbitistes obtusus alpinus* Fruhstorfer, 1921 as valid species and refer to it all the alpine and apennine populations previously assigned to *B. obtusus*; they also state to use the name *Barbitistes obtusus* only for the male from Sardinia described by Targioni Tozzetti (1881).

Barbitistes yersini Brunner, 1878

AVAILABLE DATA

Pescasseroli, Mandrella, sentiaro Z1	1300	Abr	AQ	PF
Pettorano sul Gizio	900	Abr	AQ	PF
Sperone (uninhabited village)	1221	Abr	AQ	PF

GENERAL DISTRIBUTION. Transadriatic species, widely distributed along the Balkanic peninsula from the Carso Triestino (Italy) to Corfù island, and recently recorded for several localities in Central-Sern Italy (La Greca et al., 1997).

ECOLOGY AND REMARKS. Termophilous species, present early in the season (May-July) and living on bushes or small trees. It is common on *Spartium junceum*, *Pistacia lentiscus*, *Fraxinus* sp., and also on *Ostrya carpinifolia*; in the PNALM it has been found also in a beech wood.

Leptophyes laticauda (Frivaldsky, 1867)

AVAILABLE DATA

Pettorano sul Gizio	900	Abr	AQ	PF
Val Fondillo	1300	Abr	AQ	PF
Villetta Barrea	990	Abr	AQ	PF, PT

GENERAL DISTRIBUTION. Central Europe, from France to Romania; in Italy distributed from the N to Abruzzo region (Fontana et al., 2002).

ECOLOGY AND REMARKS. Mesophilous to mesohygrophilous submontane species, living

on bushes or small trees. In the PNALM it has been found on small trees of *Salix* sp., in wet habitats (Val Fondillo, Villetta Barrea) and on *Ostrya carpinifolia*, in a mesophilous habitat of the loc. of Pettorano sul Gizio, together with *Barbitistes yersini*.

Leptophyes punctatissima (Bosc, 1792)

AVAILABLE DATA

Lago Montagna Spaccata	1050	Abr	AQ	PT
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GENERAL DISTRIBUTION. W, Central and S Europe; in Italy it is common in western Alps, while it seems scattered along Italian Peninsula, Sardinia and Sicily.

ECOLOGY AND REMARKS. Mesophilous species living on trees or bushes or even on *Rubus* sp. or tall herbs. It lives on ecotones, sometimes in bushed meadows or clearings.

Poecilimon superbus (Fischer, 1854)

AVAILABLE DATA

Colle della Croce, Barrea	1150	Abr	AQ	PF
Forca d' Acero	1500	Abr	AQ	PF
La Meta		Abr	AQ	LaOs94, LaGrMe82
La Meta, Biscuri, Fortino (Dir.)	1750-1850	Abr	AQ	PF
Lago Castel S. Vincenzo	700	Mol	IS	PF
Lago Montagna Spaccata	1050	Abr	AQ	PT
Lago Vivo	1600	Abr	AQ	LG; LaGrMe82
Le Forme	1441	Mol	IS	PF
M. Pietroso		Abr	AQ	LaGrMe82
Madonna di Tronchillo	1550	Abr	AQ	LG; LaGrMe82
Monte delle Vitelle, Pescasseroli	1800	Abr	AQ	PF
Monte Pietroso	1750	Abr	AQ	LG
Passo dell'Orso	1650	Abr	AQ	LG; LaGrMe82
Passo di Godi	1630	Abr	AQ	PF
Passo di Godi, Stazzo Bocca di Pantano	1580	Abr	AQ	PF
Pescasseroli	1000	Abr	AQ	LG, LaOs94
Rif. Pesco Iorio	1850	Abr	AQ	PF
Rocca di Cambio		Abr	AQ	LaGrMe82
Scanno	1900	Abr	AQ	LG
Serra di Rocca Chiarano	1700	Abr	AQ	LG, LaGrMe82
Serra Fonte Leardi	1900	Abr	AQ	LG, LaGrMe82
Tre Confini, Conca dell'Orso	1650	Abr	AQ	PF
Valle dell'Inferno, sent. B4	1600	Abr	AQ	PF
Valle Lunga	1900	Abr	AQ	LG, LaGrMe82
Valle Profluo	1100	Abr	AQ	LG, LaGrMe82
Valle Resione	1400	Abr	AQ	LG, LaGrMe82
Villetta Barrea		Abr	AQ	Gtos15; LaOs94

GENERAL DISTRIBUTION. Italian endemic species, present from Liguria region to Aspromonte Mts (Calabria region), more common along tyrrhenian coast.

ECOLOGY AND REMARKS. *P. superbus* lives from the sea level (Maratea, Basilicata region, P.F.) up to the subalpine or even alpine pastures in Sern Apennine. Low altitude populations are composed by big individuals with relatively longer legs. In the PNALM as well as in the La Laga Mts (Andreotti & Osella, 2001) it is the commonest Ensifera species. It lives in ecotone habitats, in bushed meadows or in pastures, where it is concentrated on tall grasses. Heller (1984 and 1988), on the basis of its bioacoustics, considers *P. superbus* as a subspecies of *P. jonicus* (Fieber, 1853). Only molecular analysis will provide a definitive answer to this interpretation.

Fam. Meconematidae

Meconema meridionale A. Costa, 1860

AVAILABLE DATA

Lago di Castel San Vincenzo	700	Mol	IS	PF
Villetta Barrea, Centro Internaz.	990	Abr	AQ	PF

GENERAL DISTRIBUTION. European species distributed from Central Europe to Sicily.

ECOLOGY AND REMARKS. Termophilous to mesophilous species, living exclusively on trees or big bushes, particularly in ecotone habitats.

Meconema thalassinum (De Geer, 1773)

AVAILABLE DATA

Val di Rose, Civitella Alfedena	1400	Abr	AQ	PF
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GENERAL DISTRIBUTION. European species present from Central Europe to Central Italy (Abruzzo). In Italy it is less common than *M. meridionalis* but, due to its evasive behaviour, the presence is probably underestimated.

ECOLOGY AND REMARKS. Typical canopy species, living on trees of mesophilous woods. In PNALM it has been found only once under a very old beech (leg. C. Vivian).

Fam. Conocephalidae

Xiphidion discolor discolor (Thunberg, 1815)

AVAILABLE DATA

Colle della Croce, Barrea	1150	Abr	AQ	PF, PNA
Castel di Sangro		Abr	AQ	BO
Lago Castel S. Vincenzo	700	Mol	IS	PF
Zittola, Ponte-		Abr	AQ	LG
Pescasseroli, S.S. Marsicana Km 46	1160	Abr	AQ	PF

GENERAL DISTRIBUTION. Central-S Europe, Palearctic Asia and N Africa, widespread along the whole Italian peninsula, Sardinia and Sicily.

ECOLOGY AND REMARKS. Hygrophilous species, living on grasses and herbs. It often occurs in large and dense populations, as in the Sangro valley near Pescasseroli.

Fam. Tettigoniidae

Tettigonia cantans (Fuessly, 1775)

AVAILABLE DATA

Fonte di Pantano	1450	Abr	AQ	PF
Passo di Godi	1630	Abr	AQ	PF, PNA
Valle Profluo	1100	Abr		LG; LaGrMe82
Villetta Barrea	1100	Abr	AQ	LG

GENERAL DISTRIBUTION. Widely distributed, occurring from the W in the Pyrenees as far as Manciuira (China) to the East. In Europe it covers a wide area from Scandinavian peninsula to S Apennine (Italy).

ECOLOGY AND REMARKS. Mesophilous and montane to subalpine species, living in ecotone habitats or on tall herbs or small bushes in wild meadows: it is common on *Urtica dioica*. In PNALM it seems to prefer wet habitats.

Tettigonia viridissima Linnaeus, 1758

AVAILABLE DATA

Alfedena	914	Abr	AQ	PT
Campomizzo, Ponte-		Abr	AQ	MVR
Castel di Sangro		Abr	AQ	BO
Colle della Croce, Barrea	1150	Abr	AQ	PF
M. Schiena Cavallo	1200	Abr	AQ	LG
Passo di Godi	1630	Abr	AQ	PF, PNA
Pescasseroli	1200	Abr	AQ	LG
Scanno	1900	Abr	AQ	LG
Serra del Monte	1600	Abr	AQ	LG
Serra Fonte Leardi	1900	Abr	AQ	LG
Villetta Barrea		Abr	AQ	Gtos15; PF

GENERAL DISTRIBUTION. Oloplearctic species, present in Italy everywhere.

ECOLOGY AND REMARKS. Mesoxerophilous species, living on tall herbs, bushes or even on the canopy of trees. In the PNALM it is a common species of the canopy of beech woods, where its loud and unmistakable song consent to detect it easily (Fontana et al., 2002).

Decticus albifrons (Fabricius, 1775)

AVAILABLE DATA

Bisegna	1200	Abr	AQ	PF
Montagna di Godi	1700	Abr	AQ	LG, PF

GENERAL DISTRIBUTION. From Canary Islands (Atlantic Ocean, Spain) to S-W Asia, widespread in the Mediterranean basin, including Italy.

ECOLOGY AND REMARKS. Xerothermophilous species, living in dry and sunny habitats. The occurrence of this species on Montagna di Godi at 1700 m is remarkable.

Decticus aprutianus Capra, 1936

AVAILABLE DATA

Aremogna, Rifugio-	1700	Abr	AQ	PF
M. Greco - Toppe del Tesoro	2100	Abr	AQ	PF, PNA, LG
Passo di Godi, Scanno	1500	Abr	AQ	PF
Pescasseroli	1600	Abr	AQ	LG
Piana di Aremogna	1700	Abr	AQ	PF
Piano di Terraegna	1350	Abr	AQ	LG; LaGrMe82
Roccaraso	1450	Abr	AQ	PF
Aremogna	1700	Abr	AQ	PF
Rif. Aremogna	1600	Abr	AQ	PF
Roccaraso, strada per Aremogna	1450	Abr	AQ	PF
Scanno		Abr	AQ	Capr36
Serra di Rocca Chiarano	1700	Abr	AQ	LG
Serra Fonte Leardi	1900	Abr	AQ	LG
sotto Valico del Campitello, sent. A4	1800	Abr	AQ	PF
Stazzo Affogata	1850	Abr	AQ	PT
Villetta Barrea	1700	Abr	AQ	LG

GENERAL DISTRIBUTION. Italian Apennine endemic species.

ECOLOGY AND REMARKS. Montane to alpine species, living on xeric high altitude meadows. *D. aprutianus* has often been considered as a subspecies of *D. verrucivorus* (Linnaeus, 1758) and sometimes its junior synonym. Fontana et al. (2001), on the basis of bioacoustic analysis, confirmed the identity of *D. aprutianus*. The type locality of this species is located within the PNALM ("mountains over Scanno" that may be supposed to be Mt Godi); this species is also very abundant on Mt Greco and on Aremogna upland. We would like to point out that in the PNALM a population of *D. aprutianus* lives in the same valley where is occurring its related species *D. v. verrucivorus*; this co-occurrence shows actual specific separation of them, in fact, they are well isolated by their different song (Fontana & Odè, in preparation).

Decticus verrucivorus verrucivorus Linnaeus, 1758

AVAILABLE DATA

Frattura	1400	Abr	AQ	PF
M. Rotondo, Scanno		Abr	AQ	PF
Monte delle Vitelle, Pescasseroli		Abr	AQ	PF
Pescasseroli		Abr	AQ	PF
Rotondo, Monte- (Scanno-AQ)		Abr	AQ	PF
Scanno, Frattura, M. Ganzana	1400	Abr	AQ	PF

GENERAL DISTRIBUTION. Widely distributed from Europe to Caucasus and Siberia. In Italy it is common along Alps and widespread along Apennines as far as Mount Sirino (Basilicata Region) to the S.

ECOLOGY AND REMARKS. Montane to subalpine species, living in grassy meadows also intensively grazed. In the PNALM it lives at lower altitude than *D. aprutianus*, in less dry habitat.

Platycleis grisea grisea (Fabricius, 1781)

AVAILABLE DATA				
Alfedena		Abr	AQ	LaOs94
Barrea	1080	Abr	AQ	PT
Colle della Croce, Barrea	1150	Abr	AQ	PF
Costa delle Vitelle		Abr	AQ	LG; LaGrMe82
La Meta, Biscuri, Fortino (Dir.)	1750-1850	Abr	AQ	PF
Lago Vivo, la Meta	1590	Abr	AQ	PF
M. Pietroso		Abr	AQ	LaGrMe82
M. Schiena Cavallo	1900	Abr	AQ	LG; LaGrMe82
Marsicano, Monte-	1800	Abr	AQ	LG
Montagna di Godi		Abr	AQ	LG; LaGrMe82, LaOs94
Monte delle Vitelle, Pescasseroli	1800	Abr	AQ	PF
Passo di Godi	1630	Abr	AQ	PF
Passo di Godi, Stazzo Bocca di Pantano	1580	Abr	AQ	PF
Pescasseroli	1900	Abr	AQ	LG
Rif. Pesco Iorio	1850	Abr	AQ	LG; LaGrMe82; PF, PNA
Rocca di Cambio		Abr	AQ	LaGrMe82
Scanno	1900	Abr	AQ	LG
Schiena Cavallo, Monte-	1650	Abr	AQ	LaGrMe82
Serra del Monte		Abr	AQ	LG; LaGrMe82
Serra Fonte Leardi		Abr	AQ	LG; LaGrMe82
Valle Orsara	1550	Abr	AQ	LaGrMe82
Villetta Barrea		Abr	AQ	LaOs94

GENERAL DISTRIBUTION. From S Europe to S Russia; in Italy it is very common from the Alps to the Apennines, as well as in Sardinia and Sicily. In PNALM it is very common.

ECOLOGY AND REMARKS. Submontane to subalpine species, living in sunny and dry habitats from low to high altitudes. It lives often at the base of small bushes in open habitats or in ecotones. In subalpine localities it is very common on stony slopes, where it lives often with *Oedipoda germanica*. At higher altitudes it also occurs within *Juniperus* sp. bushes, together with *Eupholidoptera chabrieri chabrieri*.

Tessellana tessellata tessellata (Charpentier, 1825)

AVAILABLE DATA

Colle della Croce, Barrea	1150	Abr	AQ	PF
La Canala - Rifugio				
Prato Rosso, sent. A1	1400-1450	Abr	AQ	PF, PNA
Lago Castel S. Vincenzo	700	Mol	IS	PF
Lago di Barrea Nord	971	Abr	AQ	PF
Rifugio Prato Rosso, sent. A1	1536	Abr	AQ	PF
Roccaraso	1450	Abr	AQ	PF
Roccaraso, strada per Aremogna	1450	Abr	AQ	PF
Villetta Barrea	1200	Abr	AQ	LG

GENERAL DISTRIBUTION. Olomediterranean species, occurring from Canary Islands (Atlantic Ocean, Spain) throughout N Africa and S Europe to Caucasus as far as to Iran. Widespread in Italy, where it is rare in the Alps (only few known localities), but very common along Apennines and in Sardinia and Sicily.

ECOLOGY AND REMARKS. Xerothermophilous species, typical of pseudosteppic habitats, living on grasses, herbs or small bushes. Quite common in the PNALM where it is a submontane to montane species.

Bicolorana bicolor bicolor (Philippi, 1830)

AVAILABLE DATA

Colle della Croce, Barrea	1150	Abr	AQ	PF
La Meta, Biscuri, Fortino (Dir.)	1750-1850	Abr	AQ	PF
Passo di Godi	1630	Abr	AQ	PF
Roccaraso	1450	Abr	AQ	PF
Roccaraso, strada per Aremogna	1450	Abr	AQ	PF

GENERAL DISTRIBUTION. Euroasiatic species, distributed from France to Siberia and Mongolia; in Italy it covers East and W Alps and N, Central and S Apennines.

ECOLOGY AND REMARKS. Montane to subalpine (rarely submontane) species, mesohygrophilous, mostly occurring with dense populations. Its presence along the Apennines is scattered and only in the PNALM it seems to be quite common.

Sepiana sepium (Yersin, 1854)

AVAILABLE DATA

Lago Castel S. Vincenzo	700	Mol	IS	PF
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GENERAL DISTRIBUTION. S-European species, distributed from Spain to Greece, Caucasus and Middle Asia. Widespread in Italy, even if rare in the N, where it is known only from Liguria, Veneto and Friuli Venezia Giulia regions (Fontana et al., 2002).

ECOLOGY AND REMARKS. Xerothermophilous species living at the base of bushes or tall herbs and in ecotone habitats.

Pholidoptera fallax (Fischer, 1854)

AVAILABLE DATA				
Castel di Sangro		Abr	AQ	BO
Colle della Croce, Barrea	1150	Abr	AQ	PF
Lago Castel S. Vincenzo	700	Mol	IS	PF
Lago Vivo	1590	Abr	AQ	PF
Le Forme	1441	Mol	IS	PF
M. Prato Maiuri	1500	Abr	AQ	LG; LaGrMe82
M. Schiena Cavallo	1900	Abr	AQ	LG; LaGrMe82
Madonna di Tronchillo		Abr	AQ	LG; LaGrMe82
Montagna di Godi	1700	Abr	AQ	LG; LaGrMe82
Pantano, Fonte di-		Abr	AQ	PF
Monte Marsicano	1500	Abr	AQ	LG
Monte La Meta		Abr	AQ	PF, Ebn15a, LaOs94
Monte Prato Maiuri		Abr	AQ	LaGrMe82
Monte Schiena Cavallo		Abr	AQ	LaGrMe82
Passo di Godi	1630	Abr	AQ	PF
Passo di Godi, Fonte Pantano		Abr	AQ	PF
Passo di Godi, Stazzo Bocca di Pantano	1580	Abr	AQ	PF
Pescasseroli	1000	Abr	AQ	LG; LaGrMe82
Rif. Pesco Iorio	1850	Abr	AQ	PF; LaGrMe82, LG
Rocca di Cambio		Abr	AQ	LaGrMe82
Rocca Pia, Pian Cinquemiglia, faggeta		Abr	AQ	LG
Roccaraso		Abr	AQ	LG; LaGrMe82
Scanno	1900	Abr	AQ	LG
Serra Fonte Leardi	1900	Abr	AQ	LG; LaGrMe82
Tre Confini, Conca dell'Orso	1441	Mol	IS	PF
Val di Rose	1400	Abr	AQ	PNA
Valle Ciavolara	1500	Abr	AQ	LG; LaGrMe82
Valle dell'Inferno, sent. B4	1600	Abr	AQ	PF
Valle Resione	1400	Abr	AQ	LG
Villetta Barrea	1400	Abr	AQ	LG

GENERAL DISTRIBUTION. European species occurring in S France, Italy, Austria, Slovakia, Balkanic Peninsula, Bulgaria and Romania as far as Turkey. In Italy it lives along the prealpine region, in the Apennines, Sardinia and Sicily.

ECOLOGY AND REMARKS. Xerothermophilous species in N Italy; in S Apennines it is frequently an orophilous and criophilous species, present at higher altitudes, where it lives on *Juniperus* sp. bushes, as in the Mount Pollino (Basilicata region). In the PNALM *P. fallax* is a montane to subalpine species, common at altitudes over 1600 m and living in small bushes in grazed meadows or subalpine grassland.

Pholidoptera griseoptera (De Geer, 1775)

AVAILABLE DATA				
Montagna di Godi	1700	Abr	AQ	LG; LaGrMe82
Valle Resione	1400	Abr	AQ	LG; LaGrMe82
Villetta Barrea	1400	Abr	AQ	LG

GENERAL DISTRIBUTION. Widely distributed all over Europe to Urals and Caucasus. In Italy it is common in the Alps and scattered along the Apennines to La Sila Mountains (Calabria region) and Sardinia island.

ECOLOGY AND REMARKS. Mesophilous species, sometimes mesohygrophilous in S Apennines. It lives in ecotone habitats, mainly on *Rubus* sp. bushes, often in dense populations.

Eupholidoptera chabrieri chabrieri (Charpentier, 1825)

AVAILABLE DATA

Alfedena		Abr	AQ	Bacc58
Barrea	1080	Abr	AQ	PT
Civitella Alfedena		Abr	AQ	PF
Colle della Croce, Barrea	1150	Abr	AQ	PF
Lago Castel S. Vincenzo	700	Mol	IS	PF
Monte Marsicano	1500	Abr	AQ	LG
Monte Rotondo, Scanno		Abr	AQ	PF
Passo Cavulo-Val di Rose	1650	Abr	AQ	PF
Passo dell'Orso		Abr	AQ	LG; LaGrMe82
Pescasseroli	1650	Abr	AQ	LG
Pettorano sul Gizio	900	Abr	AQ	PF
Ponte Zittola		Abr	AQ	LG
Rif. Pesco Iorio	1850	Abr	AQ	PF, PNA
Scanno	1600	Abr	AQ	LG
Serra del Monte		Abr	AQ	LG; LaGrMe82
Valle Ciavolara		Abr	AQ	LG; LaGrMe82
Valle di mezzo		Abr	AQ	Mas99
Valle Resione		Abr	AQ	LaGrMe82
Villetta Barrea	1400	Abr	AQ	LG

GENERAL DISTRIBUTION. From W Alps (France, Switzerland, Italy) to Garda Lake Eern bank and Central-S Apennines.

ECOLOGY AND REMARKS. Mesoxerophilous species in N Italy, it becomes more orophilous and criophilous in S Apennines, where its populations are characterised by small individuals with peculiar titillators. Apennine populations were indeed described by Targioni Tozzetti (1881) as a distinct species, named by him *Thamnotrizon brunneri*. Harz (1969) considered this taxon as subspecies of *E. chabrieri* (Charpentier, 1825) thus treating it as *Eupholidoptera chabrieri brunneri* (Targioni Tozzetti, 1881), combination adopted subsequently also by Otte (1997). La Greca (1959) and Baccetti (1959b) stated the synonymy *Thamnotrizon brunneri* = *E. chabrieri*; Massa (1999) confirmed this synonymy too, but recently M. La Greca reported to one of us (P.F.) the new opinion that he was convinced that *E. brunneri* could be a valid species. Further studies involving bioacoustic and molecular evidences as well are needed to establish definitely the taxonomic status of this species.

Yersinella raymondi (Yersin, 1860)

AVAILABLE DATA

Settefrati	953	Laz	FR	PF
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GENERAL DISTRIBUTION. N Mediterranean region, from Spain to Greece; quite common along the prealpine region and Italian peninsula, Sardinia and Sicily (Fontana et al., 2002).

ECOLOGY AND REMARKS. Mesotermophilous species, living on bushes or high herbs, often in ecotone habitats; in PNALM we found it on *Rubus* sp. In the Italian tyrrhenian area and in Southern France (Fontana et al., 2002) also *Yersinella beybienkoi* La Greca, 1974 occurs; this species has been recorded on Gran Sasso Mountains (above Prati di Tivo, P.F.) but it seems not very common in Central and S Apennines.

Rhacocleis germanica (Herrich-Schaeffer, 1840)

AVAILABLE DATA

Barrea	1080	Abr	AQ	PT
Settefrati	953	Laz	FR	PF

GENERAL DISTRIBUTION. From S Europe (S East France, Corsica, Italy, Balkanic peninsula) to Turkey. It has been recorded from the prealpine region, Italian peninsula and Sicily.

ECOLOGY AND REMARKS. Termophilous and ecotone species, living under trees or around and within bushes. In S Apennines *R. neglecta* (A. Costa, 1863) is clearly more common than *R. germanica* (Andreotti & Osella, 2001).

Saga pedo (Pallas, 1771)

AVAILABLE DATA

Monte della Selva, galleria di Carrito	1200	Abr	AQ	PNA (not collected)
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GENERAL DISTRIBUTION. From S-Central Europe to Siberia and Wern China. In Italy it is widespread from the prealpine region, along the peninsula, to Sardinia and Sicily.

ECOLOGY AND REMARKS. Xerophilous species, in the N it lives in xerotermophilous habitats but generally it prefers dry, sunny and often stony habitats. It is one of the largest European insects and one of the very few Orthopteroid insects listed in the Appendixes of EC Habitat Directive 92/43; it also shows many interesting biological peculiarities (Fontana & Cussigh, 1996; Fontana et al., 2002). The presence of *Saga pedo* in the PNALM and in the surrounding areas is known only after that one specimen has been shown by a tourist in the "Centro Insetto" located at San Sebastiano. The habitat of the locality of this record should support the presence of a population of this species in the area.

Fam. Bradyporidae

Ephippiger cavannai (Targioni Tozzetti, 1881)

AVAILABLE DATA

Colle della Croce, Barrea	1150	Abr	AQ	PF, PT
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GENERAL DISTRIBUTION. S Italy endemic species, known from Abruzzo to Calabria regions.

ECOLOGY AND REMARKS. Very peculiar species (La Greca, 1959), xerophilous to mesophilous, living from the sea level (Maratea, Basilicata region, P.F.) up to the montane level (M. Pollino, Rif. De Gasperi, 1500 m Basilicata region, P.F.; La Sila, M. Botte Donato, 1450 m, Calabria region, P.F.). Specimens of montane populations (including PNALM too) are small in size, while coastal population specimens are very large (almost the biggest *Ephippiger* in Italy). Morphological and bioacoustic observations (P. F.) confirm the belonging to the same species of these different populations.

Ephippiger ruffoi Galvagni, 1955

AVAILABLE DATA

Passo di Godi, Stazzo				
Bocca di Pantano	1580	Abr	AQ	PF, PNA
Rocca di Cambio		Abr	AQ	LaGrMe82
Scanno	1800	Abr	AQ	LG
Serra dei Curti		Abr	AQ	LaGrMe82
Serra Fonte Leardi	1900	Abr	AQ	LaGrMe82
Serra Rocca Chiarano		Abr	AQ	LG; LaGrMe82
Villetta Barrea	1700	Abr	AQ	LG

GENERAL DISTRIBUTION. Central Apennine endemic species.

ECOLOGY AND REMARKS. Montane to alpine species, living on pastures even intensively grazed, mainly occurring on *Juniperus* sp. small bushes or on high herbs like *Verbascum* sp.

Fam. Rhabdophoridae

Dolichopoda geniculata (A. Costa, 1860)

AVAILABLE DATA

Barrea	1080	Abr	AQ	PT
Opi (AQ)		Abr	AQ	Galv68a; BaCa69
Prato Rosso, Rifugio-	1600	Abr	AQ	Galv68a; BaCa59
Villetta Barrea		Abr	AQ	Galv68a; BaCa69

GENERAL DISTRIBUTION. Italian endemic species occurring in Central-S peninsula.

ECOLOGY AND REMARKS. Troglophilous species, living on the walls of natural caves, and in artificial caves or cellars. It may be frequently observed out of caves or cellars, mainly in beech underwood.

Fam. Gryllidae

Gryllus bimaculatus De Geer, 1773

AVAILABLE DATA

Forca Resuni	1800	Abr	AQ	PT
Villetta Barrea		Abr	AQ	Gtos15

GENERAL DISTRIBUTION. S Europe, N Africa and Asia. In Italy it is widespread along the peninsula, in Sardinia, Sicily and many small islands; in N Italy it has been recorded only from Liguria region and Trieste province.

ECOLOGY AND REMARKS. Termophilous species, often anthropophilous. Long-winged individuals, very abundant in most populations, may fly away for kilometers, colonising new territories, before inhabited by this species; its presence at high altitude in the PNALM may be related to its active fly. It has also been recently found at high altitude in French Alps too, in the locality of Madonne de la Fenetre, Saint Martin Vesubie, 1950 m (Galvagni & Fontana, 2003).

Gryllus campestris Linnaeus, 1758

AVAILABLE DATA

Fonte Difesa	1200	Abr	AQ	LaGrMe82
Lago Castel S. Vincenzo	700	Mol	IS	PF
Monte della Selva, galleria di Carrito	1200	Abr	AQ	PF (not collected)
Monte La Meta		Abr	AQ	LaOs94
Passo di Godi, Stazzo Bocca di Pantano	1580	Abr	AQ	PF
Ponte Campomizzo		Abr	AQ	MVR
Valle Fiorita	1350	Mol	IS	PT
Vastogirardi	1200	Mol	IS	LaGrMe82

GENERAL DISTRIBUTION. Central and S Europe; Mediterranean basin and Asia as far as Iran. It occurs in all regions of Italy.

ECOLOGY AND REMARKS. Mesotermophilous and geophilous species, living on sunny slopes with low grasses, even in intensively grazed pastures.

Eumodicogryllus burdigalensis burdigalensis (Latreille, 1804)

AVAILABLE DATA

Lago di Castel San Vincenzo	700	Mol	IS	PF
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GENERAL DISTRIBUTION. S Europe, Mediterranean basin to Afghanistan. It is widespread along all the Italian peninsula, in Sardinia and Sicily.

ECOLOGY AND REMARKS. Mesotermophilous species, living in stony and dry natural places, also frequent in cultivated fields and sometimes anthropic places.

Pteronemobius concolor (Walker, 1871)

AVAILABLE DATA

Lago di Castel San Vincenzo	700	Mol	IS	PF
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GENERAL DISTRIBUTION. S Europe, N Africa, S-W Asia, present everywhere in Italy.

ECOLOGY AND REMARKS. Hygrophilous species, living at the edge of lakes, ponds and ditches; it jumps into the water and actively swims on surface (Fontana et al., 2002).

Oecanthus pellucens pellucens (Scopoli, 1763)

AVAILABLE DATA

Scanno	Abr	AQ	Ebn15
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GENERAL DISTRIBUTION. Central-S Europe, Africa and Asia, everywhere present in Italy.

ECOLOGY AND REMARKS. Termophilous species, living on bushes or trees and high herbs.

Fam. Mogoplistidae

Mogoplistes brunneus Serville, 1839

AVAILABLE DATA

Opi	1000	Abr	AQ	LG
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GENERAL DISTRIBUTION. S Europe (France, Italy, Balkanic peninsula and Corfù), common in the Italian peninsula, Sardinia and Sicily; recorded in the N only from the Carso Triestino (Trieste province, Friuli Venezia Giulia region).

ECOLOGY AND REMARKS. Termophilous species living in the underwood of *Quercus* spp. included *Quercus ilex*.

Fam. Gryllotalpidae

Gryllotalpa gryllotalpa (Linnaeus, 1758)

AVAILABLE DATA

Campomizzo, Ponte-	Abr	AQ	MVR
Pizzone	Mol	IS	PT
Villetta Barrea	Abr	AQ	Gtos15

GENERAL DISTRIBUTION. Central and S Europe, England. Few data are known from Italy, due to difficulties to morphologically identify taxa of this genus, which includes different sibling species.

ECOLOGY AND REMARKS. All *Gryllotalpa* are geophilous species, often abundant in wet lands. Among the 8 species occurring in Italy (identified mostly on the basis of chromosome differences) only *G. gryllotalpa* lives in the Central-S peninsula.

Fam. Tetrigidae

Paratettix meridionalis (Rambur, 1838)

AVAILABLE DATA

Lago di Castel San Vincenzo	700	Mol	IS	PF
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GENERAL DISTRIBUTION. Mediterranean basin, Caucasus and Iran, widespread along Italian peninsula, Sardinia and Sicily.

ECOLOGY AND REMARKS. Like all Tetrigidae, hygrophilous and termophilous species.

Uvarovitettix depressus (Brisout, 1848)

AVAILABLE DATA

Canpitelli	1400	Abr	AQ	PF, PT
Lago Castel S. Vincenzo		Mol	IS	PF
Lago di Castel San Vincenzo	700	Mol	IS	PF
Opi		Abr	AQ	PF
Orso, Colle dell' - (AQ)	1672	Abr	AQ	PF
Pescasseroli		Abr	AQ	MVE
Valico dell'Orso	1672	Abr	AQ	PF

GENERAL DISTRIBUTION. S Europe, N Africa and Middle Asia, widespread along Italian peninsula and Sicily.

ECOLOGY AND REMARKS. Hygrophilous and termophilous species, quite common in the PNALM, also at high altitudes.

Tetrix bipunctata kraussi (Saulcy, 1888)

AVAILABLE DATA

Villetta Barrea		Abr	AQ	Gtos15; Bacc63b
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GENERAL DISTRIBUTION. Alps, Italian and Balkanic peninsulas, known from the Italian Alps to Calabria region.

ECOLOGY AND REMARKS. Montane to subalpine taxon; in the Apennines, where it seems to be very rare, it lives in fresh habitats.

Tetrix subulata (Linnaeus, 1758)

AVAILABLE DATA

Castel di Sangro		Abr	AQ	BO
Godi, Monte-		Abr	AQ	Gtos15
Ortucchio	700	Abr	AQ	PF
Zittola, Ponte-		Abr	AQ	LG

GENERAL DISTRIBUTION. Holarctic species, recorded along the whole Italian peninsula, Sardinia and Sicily.

ECOLOGY AND REMARKS. Mesohygrophilous species.

Fam. Acrididae

Italopodisma acuminata acuminata (La Greca, 1969)

AVAILABLE DATA				
Monte Greco		Abr	AQ	Gtos15
Monte Greco, Toppe del Tesoro	2000	Abr	AQ	PF, PNA
Pratello, Monte- (AQ)	1800	Abr	AQ	PF
Scanno	1900	Abr	AQ	MVR
Serra di Rocca Chiarano	1700	Abr	AQ	LG
Serra Fente Leonardi, Scanno	1900	Abr	AQ	LG, PF
Sparvera, Serra-		Abr	AQ	Galv73
Villetta Barrea	1700	Abr	AQ	LG

GENERAL DISTRIBUTION. Central Apennines endemic taxon, occurring only in the Eastern part of the PNALM mountains.

ECOLOGY AND REMARKS. All the taxa belonging to the genus *Italopodisma* Harz, 1973 are orophilous (eualpine) and mesophilous (La Greca & Messina, 1982), and live in alpine meadows or in stony slopes. They occur only in Central Apennine massives. Only one species or subspecies may occur on a single massive and only two species occur on more than one relief, namely *I. costai* (Targioni Tozzetti, 1881) and *I. fiscellana* (La Greca, 1954). *Peripodisma* Willemse, 1972, represented by only one extremely isolated species, *Peripodisma tymphii* Willemse, 1972, on Mt Tymphi (Pindo Mts, Greece), seems to be the European genus more related to *Italopodisma* (Fer Willemse, pers. comm.). *I. acuminata acuminata* is very abundant on Monte Greco, particularly in the loc. Toppe del Tesoro, where, with *Stenobothrus apenninus*, is the commonest Orthoptera species.

Italopodisma acuminata marsicana (La Greca, 1969)

AVAILABLE DATA				
M Capraro		Abr	AQ	PT
Marsicano, Monte-	1800	Abr	AQ	LG
Monte Palombo	1900	Abr	AQ	LG, MVR
Pescasseroli	1600	Abr	AQ	LG
Piano di Terraegna	1600	Abr	AQ	LG
Rifugio Prato Rosso		Abr	AQ	Galv73; MVR
Scanno		Abr	AQ	Bacc59
Serra del Monte	1800	Abr	AQ	LG
sotto Valico del Carapale sent. A4	1800	Abr	AQ	PF
Val di Corte	1400	Abr	AQ	PF
Valle Orsara	1800	Abr	AQ	LG

GENERAL DISTRIBUTION. Central Apennines endemic taxon, present only in the central range of the PNALM.

ECOLOGY AND REMARKS. It lives in the same habitats of the other taxa of this genus, but it seems to occur with less abundant populations.

Italopodisma fiscellana (La Greca, 1954)

AVAILABLE DATA

Monte Cornacchia (Collimento-AQ)		Abr	AQ	LaGr69a
Monte Prato Maiuri	1850	Abr	AQ	LG; Galv73
Monte Schiena Cavallo	1900	Abr	AQ	LG, Galvagni 1973
Pescasseroli	1900	Abr	AQ	LG

GENERAL DISTRIBUTION. Central Apennines endemic taxon, present in different relieves, that is Gran Sasso, Reatini, Velino-Sirente, Simbruini, Sibillini Mts., and PNALM.

ECOLOGY AND REMARKS. It occurs in the same habitats of other taxa of the genus.

Italopodisma trapezoidalis aprutiana (La Greca, 1969)

AVAILABLE DATA

Monte Marsicano		Abr	AQ	Galv73
Rif. Pesco di Iorio	1800	Abr	AQ	LG, PF, PNA
Tre Confini, Conca dell'Orso	1650	Abr	AQ	PF

GENERAL DISTRIBUTION. Central Apennines endemic taxon, present only on the central-western mountains of the PNALM.

ECOLOGY AND REMARKS. It occurs in the same habitats of other taxa of this genus, with small and very isolated populations.

Italopodisma trapezoidalis trapezoidalis (La Greca, 1969)

AVAILABLE DATA

Barrea	1900	Abr	AQ	MVR
Camosciara	1700	Abr	AQ	Bacc91
Civitella Alfedena	1900	Abr	AQ	PF
Passo Cavulo, La Camosciara	1942	Abr	AQ	PF
La Meta, Biscuri, Fortino (Dir.)	1750-1850	Abr	AQ	PF
La Meta, Passo dei Monaci	1850	Mol	IS	PF
LagoVivo	1600	Abr	AQ	PF, PNA, LG; LaGr69
Mandra delle Vacche	1700	Abr	AQ	PF
Monte la Meta	1700	Abr	AQ	Galv73a; PT; Bacc59, PF; LaGr69
Passo dei Monaci	1850	Mo	IS	PF
Val di Rose, Forca Resuni	1900	Abr	AQ	PF, PT
Valle Lunga, Barrea	1900	Abr	AQ	LG, PF
Valle Resione	1400	Abr	AQ	LG
Villetta Barrea	1600	Abr	AQ	LG

GENERAL DISTRIBUTION. Central Apennines endemic taxon, present only on La Meta massif.

ECOLOGY AND REMARKS. Very abundant taxon, living in stony or dry meadows, also occurring in intensively grazed alpine pastures. In the locality Lago Vivo it is one of the commonest Orthoptera species.

Pezotettix giornai (Rossi, 1794)

AVAILABLE DATA

Lago Castel S. Vincenzo	700	Mol	IS	PF
Lago di Barrea Nord	971	Abr	AQ	PF, PNA

GENERAL DISTRIBUTION. S Europe, N Africa, to East as far as to Caucasus. Recorded from all the Italian regions.

ECOLOGY AND REMARKS. Mainly thermophilous, lowland to submontane species, living in dry, sunny and stony meadows, very scarce in the PNALM.

Calliptamus italicus italicus (Linnaeus, 1758)

AVAILABLE DATA

Scanno		Abr	AQ	LG
Lago Castel S. Vincenzo	700	Mol	IS	PF
SS 158 Km 8		Mol	IS	PT
Villetta Barrea		Abr	AQ	Gtos15

GENERAL DISTRIBUTION. Widely distributed, occurring in continental Europe, Eastward to lake Baikal and Southward to Afghanistan. Common and widespread almost in all Italian regions.

ECOLOGY AND REMARKS. Mesoxerophilous species, living in dry, stony and sunny meadows, also frequent in montane habitats.

Calliptamus siciliae Ramme, 1927

AVAILABLE DATA

Biscurri	1600	Abr	AQ	PT
La Canala - Rifugio Prato Rosso, sent. A1	1400-1450	Abr	AQ	PF
Lago di Barrea Nord	971	Abr	AQ	PF
Monte Rotondo	1700-1800	Abr	AQ	PF, PNA
Frattura, M. Genzana (Scanno)	1400	Abr	AQ	PF

GENERAL DISTRIBUTION. Mediterranean basin, Ewards to Manciuaria (China), known from almost all Italian regions.

ECOLOGY AND REMARKS. Mesoxerophilous species, living in dry meadows or in stony places, submontane to montane, mainly in the Apennines.

Locusta migratoria cinerascens Fabricius, 1781

AVAILABLE DATA

Valle Cupella	1600	Abr	AQ	PT
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GENERAL DISTRIBUTION. S Europe, Asia and Africa. Solitary form is known from all the Italian regions.

ECOLOGY AND REMARKS. Mesotermophilous and hygrophilous species. Nymphs live usually in moderately wet habitats, while adults generally move to dry and sandy places, overwintering also in warmer sites.

Oedipoda caeruleascens caeruleascens (Linnaeus, 1758)

AVAILABLE DATA

Alfedena	920	Abr	AQ	PT
Frattura, M. Genzana (Scanno)	1400	Abr	AQ	PF
Gioia Vecchio	1250	Abr	AQ	LG
Lago di Barrea Nord	971	Abr	AQ	PF, PNA
Lecce nei Marsi (AQ)	1540	Abr	AQ	MVR
Monte delle Vitelle, Pescasseroli	1800	Abr	AQ	PF
Monte Godi		Abr	AQ	Gtos15
Monte Schiena Cavallo		Abr	AQ	LaGrMe82
Pescasseroli	1250	Abr	AQ	LaGrMe82; PF
Villetta Barrea		Abr	AQ	Gtos15

GENERAL DISTRIBUTION. Europe, S-Western Asia and N Africa, widespread in Italy, islands included.

ECOLOGY AND REMARKS. Xerotermophilous and eliophilous species, living in stony or sandy places. Differently from the Alps, in central Apennine mountains it is less common than *O. germanica*.

Oedipoda germanica (Latreille, 1804)

AVAILABLE DATA

Barrea	1090	Abr	AQ	PT
Civitella Alfedena	1300	Abr	AQ	PF
Frattura, M. Genzana (Scanno)	1400	Abr	AQ	PF
Gioia Vecchio	1100	Abr	AQ	LaGrMe82, LG
La Canala, Rif. Prato Rosso, sent. A1	1400-1450	Abr	AQ	PF
La Meta, Biscuri, Fortino (Dir.)	1750-1850	Abr	AQ	PF
Lago Vivo	1590	Abr	AQ	PF
Montagna di Godi		Abr	AQ	LG; LaGrMe82
Monte delle Vitelle, Pescasseroli	1800	Abr	AQ	PF
Monte Marsicano	1800	Abr	AQ	LG
Monte Rotondo	1700	Abr	AQ	PNA
Monte Palombo		Abr	AQ	LG; LaGrMe82
Monte Schiena Cavallo	1900	Abr	AQ	LG; LaGrMe82
Passo di Godi	1630	Abr	AQ	PF
Passo di Godi, Stazzo Bocca di Pantano	1580	Abr	AQ	PF
Pescasseroli	1500	Abr	AQ	LG; LaGrMe82
Rif. Pesco di Iorio	1800	Abr	AQ	LG, PF
Rifugio Prato Rosso, sent. A1	1536	Abr	AQ	PF
Scanno	1600	Abr	AQ	LG

Serra del Monte		Abr	AQ	LG; LaGrMe82
Tre Confini, Conca dell'Orso	1650	Abr	AQ	PF
Val di Rose	1300	Abr	AQ	PF
Valle dell'Inferno, sent. B4	1600	Abr	AQ	PF
Valle Orsara		Abr	AQ	LG; LaGrMe82

GENERAL DISTRIBUTION. S-W Europe and Middle Asia. In Italy it occurs along all the peninsula.

ECOLOGY AND REMARKS. It is less xerothermophilous than *O. caerulescens* and consequently more common in the high Apennine mountains; in the Alps known from few scattered localities.

Aiolopus strepens strepens (Latreille, 1804)

AVAILABLE DATA

Lago di Castel San Vincenzo	700	Mol	IS	PF
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GENERAL DISTRIBUTION. S Europe, Eastwards to Caucasus. Known from all Italian regions.

ECOLOGY AND REMARKS. Xerothermophilous and eliophilous species, living in bushy meadows or in dry and stony habitats; very rare in PNALM.

Paracinema tricolor bisignata (Charpentier, 1825)

AVAILABLE DATA

Montenero Val Cocchiara		Mol	IS	LG
Ponte Zittola		Abr	AQ	LG

GENERAL DISTRIBUTION. S Europe, Eastwards to Caucasus and Middle Asia. In Italy it is recorded from almost all regions.

ECOLOGY AND REMARKS. Hygrophilous and termophilous species, living in high grasses near bogs and brackish habitats.

Omocestus rufipes (Zetterstedt, 1821)

AVAILABLE DATA

Castel di Sangro		Abr	AQ	BO
Val Fondillo	1100	Abr	AQ	LG
Valle Aterno	1000	Abr	AQ	LG
Villetta Barrea		Abr	AQ	Gtos15

GENERAL DISTRIBUTION. Europe, Palearctic Asia and N Africa.

ECOLOGY AND REMARKS. Mesophilous species, occurring in many different habitats, from dry and sunny meadows to wet places; not very common in PNALM.

Dirshius haemorrhoidalis haemorrhoidalis (Charpentier, 1825)

AVAILABLE DATA				
Biscurri	1620	Abr	AQ	PT
Forca d' Acero	1500	Abr	AQ	PF
La Canala - Rifugio Prato Rosso, sent. A1	1400-1450	Abr	AQ	PF
La Meta, Biscuri, Fortino (Dir.)	1750-1850	Abr	AQ	PF
Lago Vivo		Abr	AQ	LG, LaGrMe82, PF
Le Forme	1441	Mol	IS	PF
Madonna di Tronchillo	1550	Abr	AQ	LG; LaGrMe82
Montagna di Godi	1700	Abr	AQ	LG; LaGrMe82
Monte delle Vitelle, Pescasseroli	1800	Abr	AQ	PF
Monte Meta	1590	Abr	AQ	PNA
Monte Palombo	1900	Abr	AQ	LG; LaGrMe82
Monte Prato Maiuri	1700	Abr	AQ	LG; LaGrMe82
Monte Schiena Cavallo (Pescasseroli)	1900	Abr	AQ	LaGrMe82, LG
Monte Marsicano	1800	Abr	AQ	LG
Passo di Godi	1630	Abr	AQ	PF
Passo di Godi, Fonte Pantano		Abr	AQ	PF
Passo di Godi, Stazzo Bocca di Pantano	1580	Abr	AQ	PF
Pescasseroli	1600	Abr	AQ	LG
Pescasseroli-Opi, S.S. Marsicana Km 46	1150	Abr	AQ	PF
Piano Aremogna	1600	Abr	AQ	PF
Piano di Terraegna	1600	Abr	AQ	LG; LaGrMe82
Rif. Pesco di Iorio	1800	Abr	AQ	LG
Scanno	1600	Abr	AQ	LG; LaGrMe82
Serra del Monte	1600	Abr	AQ	LG; LaGrMe82
Serra di Rocca Chiarano	1700	Abr	AQ	LG; LaGrMe82
Serra Fonte Leardi	1900	Abr	AQ	LG; LaGrMe82
sotto Valico del Campitello, sent. A4	1800	Abr	AQ	PF
Tre Confini, Conca dell'Orso	1650	Abr	AQ	PF
Val Fondillo	1100	Abr	AQ	LG; LaGrMe82
Valle dell'Inferno, sent. B4	1600	Abr	AQ	PF
Valle Orsara	1800	Abr	AQ	LG; LaGrMe82
Valle Profluo		Abr	AQ	LG; LaGrMe82
Valle Resione	1400	Abr	AQ	LG; LaGrMe82
Villetta Barrea	1700	Abr	AQ	LG

GENERAL DISTRIBUTION. Euroasiatic species widespread almost all over Europe, Siberia, Caucasus and Asia to Manciuria and Corea. In Italy it occurs from the Alps, along the peninsula, to Sila Mts (Calabria region).

ECOLOGY AND REMARKS. Mesophilous to termophilous species, usually living from sub-montane to alpine level; very common, often abundant, in central Apennine, as well as in PNALM.

Dirshius petraeus (Brisout, 1855)

AVAILABLE DATA

Barrea Lago di Barrea		Abr	AQ	PF
Fiume Sangro		Abr	AQ	Gtos15
La Canala – Rif. Prato Rosso, sent. A1	1400-1450	Abr	AQ	PF
Lago di Barrea		Abr	AQ	PF
Monte Genzana	1400	Abr	AQ	PF
Monte Rotondo	1700-1800	Abr	AQ	PF, PNA
Piano Aremogna	1600	Abr	AQ	PF
Rifugio Prato Rosso, sent. A1	1536	Abr	AQ	PF
Scanno	1600	Abr	AQ	LG
Monte Genzana, Frattura (Scanno)	1400	Abr	AQ	PF
Serra del Monte	1600	Abr	AQ	LG; LaGrMe82
sotto Valico del Campitello, sent. A4	1800	Abr	AQ	PF
Valle Resione	1400	Abr	AQ	LG
Villetta Barrea	1400	Abr	AQ	LG

GENERAL DISTRIBUTION. Central and S Europe, Middle Asia, Caucasus, Kazakhstan and Siberia. In Italy it is widespread in the N, all along the peninsula and in Sardinia.

ECOLOGY AND REMARKS. Xerothermophilous species, living in steppic meadows and in stony habitats. In central Apennine it lives from submontane to high montane level.

Stenobothrus apenninus Ebner, 1915

AVAILABLE DATA

Costa delle Vitelle	1900	Abr	AQ	LG; LaGrMe82
La Camosciara, Passo Cavulo	1942	Abr	AQ	PF
La Meta, Biscuri, Fortino (Dir.)	1750-1850	Abr	AQ	PF
Madonna di Tronchillo		Abr	AQ	LaGrMe82
Monte Greco-Toppe del Tesoro	2000	Abr	AQ	PNA
Monte delle Vitelle, Pescasseroli	1800	Abr	AQ	PF
Monte Greco		Abr	AQ	LG; LaGrMe82
Monte Greco - Toppe del Tesoro	2100	Abr	AQ	PF
Monte Palombo	1900	Abr	AQ	LG; LaGrMe82
Monte Petroso		Abr	AQ	LaGrMe82, LG
Monte Prato Maiuri		Abr	AQ	LaGrMe82, LG
Monte Schiena Cavallo		Abr	AQ	LaGrMe82
Monte Marsicano	1800	Abr	AQ	LG
Monte Meta		Abr	AQ	Galv71, Ebn15, LG
Monte Schiena Cavallo	1860	Abr	AQ	LG
Pescasseroli	1600	Abr	AQ	LG
Piano di Terraegna	1600	Abr	AQ	LG; LaGrMe82
Pianoro Campitelli	1400	Abr	AQ	PT
Rifugio Pesco di Iorio	1800	Abr	AQ	LG, PF
Scanno	1900	Abr	AQ	LG
Serra di Rocca Chiarano		Abr	AQ	LaGrMe82
Serra Fonte Leardi	1900	Abr	AQ	LG; LaGrMe82
sotto Valico del Campitello, sent. A4	1800	Abr	AQ	PF

Tre Confini, Conca dell'Orso	1650	Abr	AQ	PF
Valle dell'Inferno, sent. B4	1600	Abr	AQ	PF
Valle Lunga (Barrea)		Abr	AQ	LG; LaGrMe82
Valle Orsara (Monte Marsicano)	1800	Abr	AQ	LG; LaGrMe82
Villetta Barrea	1900	Abr	AQ	LG

GENERAL DISTRIBUTION. Italian Apennine endemic species, known from the Tosco-Emiliano Apennine to the Pollino Mountains (Calabria region).

ECOLOGY AND REMARKS. Mesophilous and montane to alpine species, living in steppic meadows or in stony habitats. It is often present with dense populations, characterised by high chromatic variability.

Stenobothrus lineatus lineatus (Panzer, 1796)

AVAILABLE DATA

Colle della Croce, Barrea	1150	Abr	AQ	PF
Frattura	1400	Abr	AQ	PF
Forca d'Acero	1500	Abr	AQ	PF
La Canala - Rifugio Prato Rosso, sent. A1	1400-1450	Abr	AQ	PF
La Meta, Biscuri, Fortino (Dir.)	1750-1850	Abr	AQ	PF
Lago di Barrea		Abr	AQ	PF
Lago Montagna Spaccata	1050	Abr	AQ	PT
Lago Vivo	1600	Abr	AQ	LG; LaGrMe82
Madonna di Tronchillo	1550	Abr	AQ	LG; LaGrMe82
Montagna di Godi	1700	Abr	AQ	LG; LaGrMe82, LaOs94
Monte delle Vitelle, Pescasseroli	1800	Abr	AQ	PF
Monte Genzana, Frattura (Scanno)	1400	Abr	AQ	PF
Monte Marsicano	1500	Abr	AQ	LG
Monte Pietroso	1750	Abr	AQ	LG
Monte Pietroso		Abr	AQ	LaGrMe82
Passo di Godi	1630	Abr	AQ	PF
Passo di Godi, Stazzo Bocca di Pantano	1580	Abr	AQ	PF, PNA
Pescasseroli		Abr	AQ	MVE
Piano Aremogna	1600	Abr	AQ	PF
Rifugio Pesco di Iorio	1800	Abr	AQ	LG; LaGrMe82
Scanno	1900	Abr	AQ	LG
Serra Fonte Leonarardi	1900	Abr	AQ	LG, PF
sotto Valico del Campitello, sent. A4	1800	Abr	AQ	PF
Valle Ciavolara	1500	Abr	AQ	LG; LaGrMe82
Villetta Barrea	1600	Abr	AQ	LG

GENERAL DISTRIBUTION. Central and S Europe, Eastwards to Siberia and Mongolia. In Italy it is well distributed in the Alps, Apennines and has also been recorded from Sardinia (Gennargentu Mts) and Sicily (Etna).

ECOLOGY AND REMARKS. Mesoxerophilous species, living in grasslands from submontane to alpine level.

Stenobothrus nigromaculatus nigromaculatus (Herrich-Schaeffer, 1840)

AVAILABLE DATA

Monte Greco	2000	Cal	CS	LG
Passo di Godi	1630	Abr	AQ	PF
Passo di Godi, Stazzo Bocca di Pantano	1580	Abr	AQ	PF
Piano Aremogna	1600	Abr	AQ	PF, PNA
Scanno	1900	Abr	AQ	LG
Serra Fonte Leardi	1900	Abr	AQ	LG

GENERAL DISTRIBUTION. Eurosibiric species, known from Europe to central and N Asia. In Italy it is scattered along Alps and Apennines.

ECOLOGY AND REMARKS. Mesoxerophilous species, living from montane to alpine meadows.

Aeropus sibiricus sibiricus (Linnaeus, 1758)

AVAILABLE DATA

Biscurri	1600	Abr	AQ	PT
La Camosciara		Abr		Bacc91
La Camosciara, Passo Cavulo	1942	Abr	AQ	PF
La Canala - Rifugio Prato Rosso, sent. A1	1400-1450	Abr	AQ	PF
La Meta, Biscurri, Fortino (Dir.)	1750-1850	Abr	AQ	PF
Lago Vivo	1590	Abr	AQ	PF
Madonna di Tronchillo	1550	Abr	AQ	LG
Meta, Monti della-		Abr	AQ	LaGrMe82
Montagna di Godi	1700	Abr	AQ	LG; LaGrMe82, Galv71
Monte delle Vitelle, Pescasseroli	1800	Abr	AQ	PF
Monte Greco	1900-2000	Abr	AQ	LG; LaGrMe82
Monte Marsicano	1800	Abr	AQ	LG
Monte Palombo	1900	Abr	AQ	LG; LaGrMe82
Monte Petroso	1750	Abr	AQ	LG
Monte Prato Maiuri	1700	Abr	AQ	LaGrMe82, LG
Monte Schiena Cavallo	1860	Abr	AQ	LaGrMe82, LG
Monte Tronchillo	1750	Abr	AQ	LG
Passo dell'Orso	1650	Abr	AQ	LG
Passo di Godi	1630	Abr	AQ	PF
Pescasseroli	1750	Abr	AQ	LG
Piano di Terraegna	1600	Abr	AQ	LG; LaGrMe82
Rif. Pesco Iorio	1800	Abr	AQ	PF, PNA, LG, LaGrMe82
Rifugio Prato Rosso, sent. A1	1536	Abr	AQ	PF
Scanno	1550-1900	Abr	AQ	LG; LaGrMe82
Schiena Cavallo, Monte-		Abr	AQ	La Greca et al., 1982
Serra del Monte	1800	Abr	AQ	LG; LaGrMe82
Serra Fonte Leardi	1900	Abr	AQ	LaGrMe82, LG
sotto Valico del Campitello, sent. A4	1800	Abr	AQ	PF
Tre Confini, Conca dell'Orso	1650	Abr	AQ	PF
Valle dell'Inferno, sent. B4	1600	Abr	AQ	PF
Valle Lunga	1900	Abr	AQ	LG; LaGrMe82
Valle Orsara	1550-1800	Abr	AQ	LG; LaGrMe82
Villetta Barrea		Abr	AQ	Galv71

GENERAL DISTRIBUTION. From European Mountains to China. In Italy it is known from Alps to Mt Pollino (Calabria region).

ECOLOGY AND REMARKS. Boreo-alpine species, living from montane to alpine meadows, often abundant; it is very common in PNALM.

Gomphocerus rufus (Linnaeus, 1758)

AVAILABLE DATA

Parco Nazionale d'Abruzzo, Abr AQ Ebn15, LaOs94

GENERAL DISTRIBUTION. Widespread from Europe to China. In Italy very common along the Alps, Apennines, also recorded from Sardinia.

ECOLOGY AND REMARKS. Ecotone species, living frequently under the shadow of isolated trees or along wood edges. Quite common in the Apennines, its presence in the PNALM is due only to the old record of Ebner (1915).

Myrmeleotettix maculatus maculatus (Thunberg, 1815)

AVAILABLE DATA

Costa delle Vitelle	1900	Abr	AQ	LG; LaGrMe82
Montagna di Godi		Abr	AQ	Galv71
Monte delle Vitelle, Pescasseroli	1800	Abr	AQ	PF
Monte Marsicano	1800	Abr	AQ	LG
Monte Palombo	1900	Abr	AQ	LG; LaGrMe82
Monte Petroso	1750	Abr	AQ	LG; LaGrMe82
Monte Prato Maiuri	1700	Abr	AQ	LG; LaGrMe82
Monte Rotondo	1700-1800	Abr	AQ	PF
Monte Schiena Cavallo	1900	Abr	AQ	LG, LaGrMe82
Pescasseroli	1600	Abr	AQ	LG
Piano Aremogna	1600	Abr	AQ	PF
Piano di Terraegna	1600	Abr	AQ	LG; LaGrMe82
Rifugio Prato Rosso, sent. A1	1536	Abr	AQ	PF, PNA
Scanno	1900	Abr	AQ	LG
Serra del Monte	1800	Abr	AQ	LG
Serra Fonte Leardi	1900	Abr	AQ	LG; LaGrMe82
sotto Valico del Campitello, sent. A4	1800	Abr	AQ	PF
Tre Confini, Conca dell'Orso	1650	Abr	AQ	PF
Valle Orsara	1800	Abr	AQ	LG; LaGrMe82
Villetta Barrea		Abr	AQ	Galv71

GENERAL DISTRIBUTION. Widely distributed from Europe to Siberia. In Italy it is widespread in the Alps, Apennines and Sicily (Madonie Mts).

ECOLOGY AND REMARKS. In the Apennines it is a xerothermophilous and orophilous species, living in dry and stony habitats, usually over 1500 m.

Stauroderus scalaris scalaris (Fischer Waldheim, 1846)

AVAILABLE DATA

Biscurri	1600	Abr	AQ	PF, PT
Colle della Croce, Barrea	1150	Abr	AQ	PF
Forca d'Acero	1500	Abr	AQ	PF
La Canala - Rifugio Prato Rosso, sent. A1	1400-1450	Abr	AQ	PF
Lago Vivo	1600	Abr	AQ	LG, PNA, PF; LaGrMe82
Montagna di Godi	1700	Abr	AQ	LG
Monte delle Vitelle, Pescasseroli	1600	Abr	AQ	PF
Monte Greco, Toppe del Tesoro	2100	Abr	AQ	PF
Monte Marsicano	1500	Abr	AQ	LG
Monte Palombo	1900	Abr	AQ	LG
Monte Petroso	1750	Abr	AQ	LG
Passo dell'Orso	1650	Abr	AQ	PF, LG
Passo di Godi	1630	Abr	AQ	PF
Passo di Godi, Fonte Pantano		Abr	AQ	PF
Passo di Godi, Stazzo Bocca di Pantano	1580	Abr	AQ	PF
Pescasseroli	1650	Abr	AQ	LG
Piano Aremogna	1600	Abr	AQ	PF
Canale Profluo		Abr	AQ	LaGrMe82
Rifugio Pesco Iorio	1850	Abr	AQ	PF
Rifugio Prato Rosso, sent. A1	1536	Abr	AQ	PF
Scanno	1900	Abr	AQ	LG
Serra del Monte	1600	Abr	AQ	LG
Serra Fonte Leardi	1900	Abr	AQ	LG
sotto Valico del Campitello, sent. A4	1800	Abr	AQ	PF
Toppe del Tesoro	2100	Abr	AQ	PF
Tre Confini, Conca dell'Orso	1650	Abr	AQ	PF
Valle Ciavolara	1500	Abr	AQ	LG
Valle dell'Inferno, sent. B4	1600	Abr	AQ	PF
Valle Profluo	1100	Abr	AQ	LG
Valle Resione	1400	Abr	AQ	LG
Villetta Barrea	1400	Abr	AQ	LG

GENERAL DISTRIBUTION. European Mountains Eastwards to Mongolia. In Italy it is widespread in the Alps, as well as along the peninsula.

ECOLOGY AND REMARKS. Mesophilous to mesohygrophilous and montane to alpine species, living in grasslands, often with dense populations.

Chorthippus bruttius Fontana & La Greca, 1999

AVAILABLE DATA

Lago Vivo	1600	Abr	AQ	LG
Monte della Corte		Abr	AQ	Bacc58d
Monte Prato Maiuri (Pescasseroli)	1700	Abr	AQ	LG
Pescasseroli	1000	Abr	AQ	LG, Bacc58
Pescasseroli, S.S. Marsicana Km 46	1160	Abr	AQ	PF
Villetta Barrea	1600	Abr	AQ	LG

GENERAL DISTRIBUTION. Italian Apennine endemic species, known from central Apennine to La Sila Mountainis.

ECOLOGY AND REMARKS. Hygrophilous montane species, living in meadows around wet habitats or in wet meadows. Bioacoustics and morphology of the population near Pescasseroli, in PNALM, studied by one of us (P. F.), showed small differences from the topotypical population illustrated by Fontana & La Greca (1999b).

Chorthippus dorsatus dorsatus (Zetterstedt, 1821)

AVAILABLE DATA

Castel di Sangro		Abr	AQ	LG
Colle della Croce, Barrea	1150	Abr	AQ	PF
La Canala - Rifugio Prato Rosso, sent. A1	1400-1450	Abr	AQ	PF
Lago di Barrea		Abr	AQ	PF
Le Forme	1441	Mol	IS	PF
Le Prate di Lecce	1540	Abr	AQ	PF
Lecce nei Marsi (rovine-AQ)	1540	Abr	AQ	PF
Passo di Godi	1630	Abr	AQ	PF
Passo di Godi, Stazzo Bocca di Pantano	1580	Abr	AQ	PF
Piano Aremogna	1600	Abr	AQ	PF, PNA
Pianoro Campitelli	1400	Abr	AQ	PT
Rifugio Prato Rosso, sent. A1	1536	Abr	AQ	PF
Scanno	1600	Abr	AQ	LG
Val Fondillo	1100	Abr	AQ	LG

GENERAL DISTRIBUTION. Continental Europe to Siberia. In Italy the typical subspecies is known from the Alps to Central Apennine and Sardinia (Gennargentu Mts); *C. dorsatus garganicus* has also been recorded in Southern Italy, but the identity of these populations have to be furtherly investigated.

ECOLOGY AND REMARKS. *C. d. dorsatus* is a meso-hygrophilous species, living in fresh meadows and in wet habitats. It is a montane species quite common in PNALM.

Chorthippus parallelus parallelus (Zetterstedt, 1821)

AVAILABLE DATA

Castel di Sangro		Abr	AQ	LG
Colle della Croce, Barrea	1150	Abr	AQ	PF
Fonte Pantano	1400	Abr	AQ	PF
Lago Vivo	1591	Abr	AQ	PF, PNA
Le Forme	1441	Mol	IS	PF
Passo di Godi	1630	Abr	AQ	PF
Passo di Godi, Stazzo Bocca di Pantano	1580	Abr	AQ	PF
Pescasseroli	1000	Abr	AQ	LG
Scanno	1600	Abr	AQ	LG
Serra del Monte	1600	Abr	AQ	LG
Settefrati	953	Laz	FR	PF
Val Fondillo		Abr	AQ	PF; Gtos15
Valle Profluo	1100	Abr	AQ	LG
Valle Resione	1400	Abr	AQ	LG
Villetta Barrea	1100	Abr	AQ	LG

GENERAL DISTRIBUTION. From Europe to Siberia. In Italy is known from almost all regions.

ECOLOGY AND REMARKS. Meso-hygrophilous to hygrophilous montane species, mainly in the Apennines. In PNALM it usually occurs in wet habitats.

Italohippus monticola Ebner, 1915

AVAILABLE DATA

Monte Marsicano	1800	Abr	AQ	LG
Monte delle Vitelle, Pescasseroli	1800	Abr	AQ	PF
Monte Rotondo	1700-1800	Abr	AQ	PF, PNA
Passo dei Monaci	1900	Abr	AQ	PT
Pescasseroli	1800	Abr	AQ	PF
Rif. Pesco Iorio	1800	Abr	AQ	PF
Scanno	1800	Abr	AQ	LG
Serra del Monte	1800	Abr	AQ	LG; LaGrMe82
Serra di Rocca Chiarano	1700	Abr	AQ	LG
Serra Fonte Leardi	1900	Abr	AQ	LG; LaGrMe82
Serra Rocca Chiaiano		Abr	AQ	LaGrMe82
Tre Confini, Conca dell'Orso	1650	Abr	AQ	PF
Valle Orsara	1700-1800	Abr	AQ	LG; LaGrMe82
Villetta Barrea	1700	Abr	AQ	LG

GENERAL DISTRIBUTION. Italian Apennine endemic species belonging to an Italian Apennine endemic genus (Fontana & La Greca, 1999a).

ECOLOGY AND REMARKS. Xerophilous and orophilous species, living in the alpine level, in dry and stony meadows. Identity of the populations of the genus *Italohippus* Fontana & La Greca, 1999 of PNALM is not clear, and bioacoustics as well as morphological differences between them and the topotypical ones (Gran Sasso Mts) are in progress by one of us (P. F.).

Glyptobothrus brunneus brunneus (Thunberg, 1815)

AVAILABLE DATA

La Camosciara, Passo Cavulo, la Meta	1942	Abr	AQ	PF
La Meta, Biscurri, Fortino (Dir.)	1600-1850	Abr	AQ	PF, PT
Lago di Barrea Nord	970	Abr	AQ	PNA
Lago Vivo	1600	Abr	AQ	LG; LaGrMe82
Monte Greco, Toppe del Tesoro	2100	Abr	AQ	PF, LaGrMe82
Monte Godi		Abr	AQ	LaGrMe82
Monte Marsicano		Abr	AQ	LaGrMe82
Monte Prato Maiuri		Abr	AQ	LaGrMe82
Monte Schiena Cavallo	1860	Abr	AQ	LG; LaGrMe82
Madonna di Tronchillo	1550	Abr	AQ	LG; LaGrMe82
Monte Petroso	1750	Abr	AQ	LG; LaGrMe82
Opi	1000	Abr	AQ	LG

Passo di Godi	1630	Abr	AQ	PF
Pescasseroli	1860	Abr	AQ	LG; LaGrMe82
Rifugio Aremogna	1700	Abr	AQ	PF
Rif. Pesco Iorio	1800	Abr	AQ	PF, LG; LaGrMe82
Scanno	1600	Abr	AQ	LG
Scanno		Abr	AQ	LaGrMe82
Serra del Monte	1600	Abr	AQ	LG; LaGrMe82
Serra Fonte Leardi	1900	Abr	AQ	LG; LaGrMe82
Valle dell'Inferno, sent. B4	1600	Abr	AQ	PF
Valle Lunga	1900	Abr	AQ	LG; LaGrMe82
Villetta Barrea	1600	Abr	AQ	LG

GENERAL DISTRIBUTION. Europe and Palearctic Asia (probably most old records have to be referred to other related taxa, like *G. bornhalmi* Harz, 1971). In Italy it is common everywhere along the peninsula and Sardinia, while in Sicily, S Calabria (Aspromonte Mts) and Eolian Is. (Filicudi) (P. Fontana, pers. obs.) nominal subspecies is replaced by *G. brunneus raggei* La Greca et al., 2000.

ECOLOGY AND REMARKS. In N Italy *G. b. brunneus* is a meso-termophilous species, commonly occurring from the lowland up to submontane and montane levels; in central Appennines it is usually a montane to alpine taxon, very common in dry meadows or in stony habitats.

Glyptobothrus rubratibialis Schmidt, 1978

AVAILABLE DATA

La Canala - Rifugio Prato Rosso, sent. A1	1400-1450	Abr	AQ	PF
Lago di Barrea Nord	971	Abr	AQ	PF
Lago Vivo	1600	Abr	AQ	LG
Le Forme	1441	Mol	IS	PF
M Rotondo	1880	Abr	AQ	PNA
M. Greco	2000	Abr	AQ	LG
M. Prato Maiuri	1700	Abr	AQ	LG
M. Rotondo	1700-1800	Abr	AQ	PF
Montagna di Godi	1700	Abr	AQ	LG
Monte delle Vitelle, Pescasseroli	1800	Abr	AQ	PF
Monte Genzana, Frattura (Scanno)	1400	Abr	AQ	PF
Monta Greco	2000	Abr	AQ	LG
Passo di Godi	1630	Abr	AQ	PF
Passo di Godi, Stazzo Bocca di Pantano	1580	Abr	AQ	PF
Pescasseroli	1500-1700	Abr	AQ	LG
Piano Aremogna	1600	Abr	AQ	PF
Rifugio Pesco di Iorio	1800	Abr	AQ	LG
Rifugio Prato Rosso, sent. A1	1536	Abr	AQ	PF
Scanno	1900	Abr	AQ	LG
Serra Fonte Leardi	1900	Abr	AQ	LG
sotto Valico del Campitello, sent. A4	1800	Abr	AQ	PF
Tre Confini, Conca dell'Orso	1650	Abr	AQ	PF
Val di Rose	1300	Abr	AQ	PF

Valle Cupella	1700	Abr	AQ	PT
Valle Orsara	1800	Abr	AQ	LG
Villetta Barrea	1600	Abr	AQ	LG
Villetta Barrea		Abr	AQ	Gtos15

GENERAL DISTRIBUTION. Italian Apennine endemic species, in the past recorded *G. molis* (Charpentier, 1825).

ECOLOGY AND REMARKS. Mesotermophilous montane to alpine species, living in dry and stony meadows, often very abundant and very common in central Apennines, particularly in PNLN mountains.

Glyptobothrus vagans vagans (Eversmann, 1848)

AVAILABLE DATA

Pescasseroli, Mandrella, sentiero Z1	1300	Abr	AQ	PF
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GENERAL DISTRIBUTION. Europe, Ewards to S Russia, Kazakhstan and middle Asia. In Italy it is known from N all over the peninsula.

ECOLOGY AND REMARKS. Xerothermophilous species, occurring from the sea level up to mountains. It lives usually under the shadow of isolated trees or in clearings of sparse woods. In the only known locality of PNLN it lives under trees in dry and partially stony meadows.

Euchorthippus declivus (Brisout, 1848)

AVAILABLE DATA

Alfedena		Abr	AQ	LaOs94
Colle della Croce, Barrea	1150	Abr	AQ	PF
Fondillo, Valle di-	1100	Abr	AQ	LG
Forca d' Acero	1500	Abr	AQ	PF
La Canala - Rifugio Prato Rosso, sent. A1	1400-1450	Abr	AQ	PF
La Meta, Biscuri, Fortino (Dir.)	1750-1850	Abr	AQ	PF
Lago Castel S. Vincenzo	700	Mol	IS	PF
Lago di Barrea Nord	971	Abr	AQ	PF
Le Forme	1441	Mol	IS	PF
Monte Genzana, Frattura (Scanno)	1400	Abr	AQ	PF
Passo di Godi	1630	Abr	AQ	PF
Passo di Godi, Stazzo Bocca di Pantano	1580	Abr	AQ	PF
Piano Aremogna	1600	Abr	AQ	PF
Rifugio Prato Rosso	1536	Abr	AQ	PNA
Rifugio Prato Rosso, sent. A1	1536	Abr	AQ	PF
Scanno	1600	Abr	AQ	LG
Scanno		Abr	AQ	LaOs94
Val Fondillo	1100	Abr	AQ	LG; LaGrMe82
Valle Cupella	1650	Abr	AQ	PT
Villetta Barrea		Abr	AQ	LaOs94

GENERAL DISTRIBUTION. From Spain to Ukraine. In Italy it is known almost for all regions, where is very common.

ECOLOGY AND REMARKS. Xerothermophilous species, living from the lowland to montane level. It lives in dry and often stony meadows. In central Apennine it is more common from montane to subalpine levels (Fontana et al., 2002).

Ord. PHASMATODEA

Fam. Bacillidae

Bacillus rossius rossius (Rossi, 1788)

AVAILABLE DATA

Lago Castel S. Vincenzo	700	Mol	IS	PF
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GENERAL DISTRIBUTION. Mediterranean species; the distribution of the typical subspecies, as well as that of related taxa, is not still well known.

ECOLOGY AND REMARKS. Xerothermophilous species, living from lowland to submontane level. In PNALM only two males were collected, showing that an amphigonic population occurs in this area.

Clonopsis gallica (Charpentier, 1825)

AVAILABLE DATA

Lago Castel S. Vincenzo	700	Mol	IS	PF
Colle della Croce E, Alfedena	1100	Abr	AQ	PF

GENERAL DISTRIBUTION. Mediterranean Basin. In Italy it is widespread along all the peninsula, in Sardinia and Sicily (Fontana et al., 2002).

ECOLOGY AND REMARKS. Xerothermophilous species, living from the lowland to montane level. In PNALM it is apparently more common, and probably less xerophilous, than *B. r. rossius*. Only females were collected in PNALM.

Ord. DERMAPTERA

Fam. Anisolabidae

Euborellia moesta (Gené, 1837)

AVAILABLE DATA

Castelnuovo, presso Avezzano	Abr	AQ	LaGral97
Montalto	Mol	Is	Ste179
Pettorano sul Gizio	Abr	AQ	VTAip
Vittorito, valle dell'Aterno	Abr	AQ	VTAip

GENERAL DISTRIBUTION. Mediterranean species, mostly distributed in western regions. It is present from Iberian to Balkanic peninsulas, and it is common in Tyrrhenian islands and Italy, particularly along western coasts.

ECOLOGY AND REMARKS. Termophilous species, common in Mediterranean habitats, and also present in Prealpine and Appenninic xerothermic habitats. Up to now it is known only for the surrounding protection area of the PNALM.

Fam. Labiidae

Labia minor (Linnaeus, 1758)

AVAILABLE DATA

Rifugio Pratorosso	Abr	AQ	Ste179
Trasacco, fucino	Abr	AQ	Macc33

GENERAL DISTRIBUTION. Almost cosmopolitan species, widespread in Mediterranean regions, as Italy, where it is considered an uncommon species.

ECOLOGY AND REMARKS. Common on dung-hills; it may actively fly and it is often collected at light.

Fam. Forficulidae

[*Anechura bipunctata* (Fabricius, 1781)]

No available data

GENERAL DISTRIBUTION. Steppic species, widely scattered from Europe to Asia: its distribution is discontinuous along the Alpine-Himalayan chain, from Cantabric Mountains and Pyrenees to Mongolia.

ECOLOGY AND REMARKS. According to Vigna Taglianti (in Failla et al., 1994), *A. bipunctata* was recorded only from N Italy, where it lives in montane level (upper montane level) of Alps (Piedmont, Valle D' Aosta and Lombardy); more recently, Vigna Taglianti (1999) recorded it from Apennines, on Gran Sasso Mts, where, on Monte Corvo, a small population lives. We also have to point out that the record reported by Steinmann (1979) from the PNALM ("N of Barrea on the banks of the Sangro river"), based on 3 females of the Museo zoologico "La Specola" in Florence, is due to a misidentification. In fact, one of us (A. V. T.), checking these specimens (labelled "Parco N.le Abruzzo, a N di Barrea sulle rive del Sangro, 10.VII.1963, A. Martelli leg. - *Anechura bipunctata* Fabricius, det. Dr. H. Steinmann - "La Specola" Firenze 0434"), was able to establish they are nymphs of *Forficula auricularia* Linnaeus, 1758 (Vigna Taglianti, 1999). It seems to be absent from other Apennine reliefs.

Pseudochelidura orsinii (Gené, 1833)

AVAILABLE DATA

Alfedena		Abr	AQ	Macc33
Campomizzo	1200	Abr	AQ	VT
Lago Vivo	1600	Abr	AQ	PF, VT
M. Greco	2000-2280	Abr	AQ	PF, VT, Macc33
M. Greco, Toppe del Tesoro	2100	Abr	AQ	PF
Monta Iamiccio		Abr	AQ	Gtos15, Macc33
Montagna di Godi		Abr	AQ	Gtos15, Macc33
Monte Capraro, Passo Cavuto	1950	Abr	AQ	VT
Monte Marsicano, circo glaciale	2050	Abr	AQ	VT
Monte Marsicano, cresta N	2200	Abr	AQ	VT
Monte Meta		Abr	AQ	IEB, Ebn15
Monte Meta, conca de i Biscurri	1900	Abr	AQ	VT
Monte Greco, Lago Pantaniello	1900	Abr	AQ	VT
Monte Greco, Stazzo Il Prato	2000	Abr	AQ	VT
Monte Palombo	1600-1900	Abr	AQ	VT
Monte Tranquillo	1800	Abr	AQ	VT
Padule Campomizzo-Le Prata di Gioia		Abr	AQ	MVR
Pescasseroli		Abr	AQ	IEB, MZUR, VT
Piana di Lecce dei Marsi	1540	Abr	AQ	MVR
Rif. Pesco Iorio	1800	Abr	AQ	PF
Val Fondillo		Abr	AQ	PF
Val Resione (= Valle dell'Inferno)	1300-1500	Abr	AQ	VT
Valle di Fonte d'Appia	1600	Abr	AQ	VT
Villetta Barrea		Abr	AQ	Gtos15, Macc33

GENERAL DISTRIBUTION. Apennine endemic species, distributed from Central-N Apennines (Frignana, Modena province) and from Alpi Apuane to Matese Mts in the S. It also occurs in two localities out of the Apennines, in the Alpes-Maritimes (Colle di Tenda, France) (Vigna Taglianti, 1973, 1994, 1999) and in the Venetian Prealps (Lessini Veronesi, Val di Squaranto) (Galvagni & Fontana, 1993), where it seems not related to an anthropic introduction.

ECOLOGY AND REMARKS. Montane species, present from the lower montane level in the beech clearings to the upper montane level in pseudo-alpine grasslands.

Apterygida albipennis (Megerle in Charpentier, 1825)

AVAILABLE DATA

Corfinio		Abr	AQ	VT
Pratola Peligna		Abr	AQ	VT
Palude La Zittola, Montenero Val Cocchiara	750-850	Mol	IS	BO, VT
Vallre del Giovenco, Cesoli	650-800	Abr	AQ	BO, VT
V. San Giovanni di Bisegna		Abr	AQ	BO

GENERAL DISTRIBUTION. European species, distributed from Spain to Greece, Northwards to Lithuania and Great Britain. It is well distributed in Italy along the Alps and in the

Prealpine area; it is also present in several Apennine localities, where it should be considered as a mesophilous relict. In the Apennines it is known from Reatini and La Laga Mts (Andreotti & Osella, 2001) and from several localities of L'Aquila province (Vigna Taglianti, in press); in the S its distribution is more continuous up to the Matese Mts, while only isolated populations are known from Gargano and Monte Pollino (Targioni Tozzetti & Stefanelli, 1882).

ECOLOGY AND REMARKS. It lives particularly on bushes or small trees (Fontana et al., 2002).

Forficula auricularia Linnaeus, 1758

AVAILABLE DATA

Barrea, rive del Fiume Sangro		Abr	AQ	MZUF, Stei79 (sub <i>A. bipunctata</i>)
La Meta		Abr	AQ	Ebn15
Lago di Barrea	990	Abr	AQ	VT
Lago Pantaniello	1900	Abr	AQ	VT
Lago Vivo, la Meta	1600	Abr	AQ	PF, VT
Monte Greco, Serra delle Gravare	1990-2100	Abr	AQ	VT
Monte Petroso	1900	Abr	AQ	BO
Montenero Val Cocchiara, Palude La Zittola	850	Mol	IS	BO
Opi, Torrente Sangro	1100	Abr	AQ	VT
Padule Campomizzo, Le Prata di Gioia	1200	Abr	AQ	MVR, VT
Pescasseroli		Abr	AQ	MVR
Rif. Pesco Iorio	1800	Abr	AQ	PF
Rif. Prato Rosso, sentiero A1	1536	Abr	AQ	PF
Serra Bocca Chiarano, Stazzo il Prato	2000	Abr	AQ	VT
Terraegna dint.	1600	Abr	AQ	VT
Val Fondillo	1200	Abr	AQ	Gtos15, Borr16, Crav18, Macc33, V
Villetta Barrea		Abr	AQ	Gtos15, Borr16, Crav18, Macc33
Villetta Barrea, Il Formale, Fiume Sangro	1050	Abr	AQ	VT

GENERAL DISTRIBUTION. Cosmopolitan species of Asiatic-European origin, widespread in Italy, in large islands and in some small islands (Vigna Taglianti, 1995).

ECOLOGY AND REMARKS. In central Apennine it is common in several habitats, mainly in steppic ones, at high altitude too. It is very abundant in the PNALM.

Borelli (1916), described as "*Forficula abrutiana* n. sp." two specimens collected in the PNALM (Val Fondillo, Villetta Barrea; type material preserved in the Museo Regionale di Scienze Naturali of Turin). Same data are reported by Cravero (1918) and Maccagno (1933), while *Forficula abrutiana* Borelli is considered a junior synonym of *F. auricularia* Linnaeus, 1758 (Vigna Taglianti in Failla et al., 1994); notwithstanding, the former taxon is considered as valid species in recent papers, as Harz & Kaltenbach (1976) (they also report that the type material is unknown ("unbekannt"): Vigna Taglianti, 1978), and Steinmann (1993) (who reports that the taxon was described from "unknown locality").

Forficula decipiens Gené, 1832

AVAILABLE DATA

Villetta Barrea	1000	Abr	AQ	PF
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GENERAL DISTRIBUTION. Widespread in S Europe and N Africa; it is more frequent in western and tyrrhenian regions, even if also present along Adriatic coasts in Dalmatia (Us e Matvejev, 1967). Described from the Apennine, Liguria region, *F. decipiens* is widely distributed in Italy along the peninsula, the main islands and smaller islands, where it is often the only Dermaptera present (Vigna Taglianti, 1975).

ECOLOGY AND REMARKS. Mediterranean termophilous species, living from the coast up to the mountains (Fontana et al., 2002). Anthropophilous species, its presence in the PNALM is known only for the village of Villetta Barrea. The record reported by Steinmann (1979) for the "top of M.te Maielletta" (2 females, leg. Cavanna, 1878, MZUF) have probably to be referred to a different species (presumably *Pseudocheilidura orsinii*).

Forficula obtusangula Krauss, 1904

AVAILABLE DATA

Corfinio-Roccacasale, Valle Peligna	250	Abr	AQ	BO
Lago Castel S. Vincenzo	700	Mol	IS	PF
Molina Aterno		Abr	AQ	BO
Popoli, Valle Peligna	250	Abr	AQ	BO

GENERAL DISTRIBUTION. Eastern-Mediterranean species, distributed in Balkanic peninsula (Croatia, Montenegro, Macedonia, Epirus, Peloponnesus) and widely distributed in Italy, from Veneto region to Sicily, more frequently in Central-Southern regions (Galvagni, 1973; Vigna Taglianti, 1968, 1994). In Abruzzo region it is known from few localities along the Adriatic coast in Teramo and Chieti provinces (Galvagni, 1973), in the Valle Peligna and Valle del Morrone, and recently it has been collected in the PNALM, in Molise region.

ECOLOGY AND REMARKS. Xerothermophilous species.

Forficula pubescens Gené, 1832

AVAILABLE DATA

Lago di Barrea	990	Abr	AQ	PF
Popoli, Valle Peligna		Abr	AQ	LaGral97

GENERAL DISTRIBUTION. Western-Mediterranean species, described from Sardinia and widely distributed in Italy, Sardinia and Sicily, more frequent in tyrrhenian regions.

ECOLOGY AND REMARKS. Xerothermophilous Mediterranean species; observing the drawings of the paper by Schmidt & Herrmann (2000), the record from Sardinia of *Forficula lesnei* Finot, 1887, has most probably to be referred to *F. pubescens*. *F. lesnei* should be a W European species, with mainly Atlantic distribution, occurring only in Iberian peninsula, W France and England.

Forficula silana Costa, 1881

AVAILABLE DATA

Civitella Alfedena	1120	Abr	AQ	PF
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GENERAL DISTRIBUTION. S Apennine and Sicilian endemic taxon, distributed from Abruzzo (PNALM) and Molise (Monte Pagano and Matese Mts) regions in the N to the Nebrodi Mts (Monte Soro) in Sicily.

ECOLOGY AND REMARKS. *F. silana* is a characteristic species of termophilous beech woods in S Italy.

FAUNISTIC AND ECOLOGICAL COMMENTS

ENDEMIC SPECIES. Some taxa of the genus *Italopodisma* (*I. acuminata acuminata*, *I. a. marsicana*, *I. trapezoidalis trapezoidalis* and *I. t. aprutiana*) are endemic to the main mountains of the Park. *Decticus aprutianus*, described on the basis of material from mountains above Scanno (one of the municipalities of the Park), was previously considered occurring in most of the central Apennines; recent researches on bioacoustics of *Decticus* species of the Apennines, carried out by the University of Padua, showed that *D. aprutianus* lives actually on the Abruzzo, Lazio and Molise National Park mountains, while other short winged populations have to be considered different taxa. Only a very isolated population, living on the Pollino Mts (S Italy), seems to be very closely related to *D. aprutianus*, but shows different song pattern. A research on the identity of the population of *Chorthippus bruttius* living in Sangro Valley, on the centre area of the Park, both on the basis of morphological characters and bioacoustics, is still in progress. Also the identity of the species of the genus *Italohippus* living on the Park mountains is not clear and should deserve much attention.

OROPHILOUS SPECIES. Several species are confined on the top of the mountains, on dry and sunny slopes, covered by the snow for a long period of the year. The most orophilous species are *Barbitistes alpinus*, *Decticus aprutianus*, *Decticus verrucivorus verrucivorus*, *Bicolorana bicolor bicolor*, *Ephippiger ruffoi*, *Italopodisma* spp., *Aeropus sibiricus sibiricus*, *Stenobothrus apenninus*, *Stauroderus scalaris scalaris* and *Italohippus monticola*.

MESOPHILOUS SPECIES. Most of the species living in the Park have to be considered mesophilous. They live on a large range of habitats from high mountains to wet and xerophilous places, e. g.: *Poecilimon superbus*, *Tettigonia viridissima*, *Platycleis grisea grisea*, *Oedipoda germanica*, *Omocestus rufipes*, *Dirshius haemorroidalis*, *Gomphocerus rufus*, *Chorthippus dorsatus dorsatus*, *Glyptobothrus brunneus brunneus*, *Pseudocheilidura orsinii*, *Forficula auricularia* and *Forficula silana*.

TERMOPHILOUS SPECIES. Some species are clearly termophilous and live only in the most xerophilous habitats. *Phyllodromica marginata* is a common species in hot and dry habitats of the Italian peninsula and its occurrence in the mountains is rare or occasional. Two species of Phasmatodea live in the Park, one parthenogenetic (*Clonopsis gallica*) and

one amphigonic (*Bacillus rossius rossius*). Mantodea, of which only one species (*Mantis religiosa*) lives in the area here considered, are termophilous. The most termophilous Orthoptera species are: *Tylopsis liliifolia*, *Decticus albifrons*, *Tessellana tessellata*, *Sepiana sepium*, *Rhacocleis germanica*, *Saga pedo*, *Oecanthus pellucens pellucens*, *Mogoplistes brunneus*, *Calliptamus* spp., *Dirshius petraeus*, *Glyptobothrus vagans vagans* and *Euchorthippus declivus*. Finally, among Dermaptera, *Euborellia moesta* is a termophilous species living at lower altitudes and in the surrounding territories of the Park.

HYGROPHILOUS SPECIES. Inside the Park there are many wet places, from the bottom of the valleys to the high mountains. Several species of Orthopteroid insects are exclusive of them: *Xiphidion discolor discolor*, *Pteronemobius concolor*, *Paratettix meridionalis*, *Uvarovitettix depressa*, *Tetrix subulata*, *Aiolopus thalassinum*, *Paracinema tricolor bisignata* and *Chorthippus bruttius*.

TROGLOPHILOUS AND ANTROPOPHILOUS SPECIES. Typical cave dwelling species is the Orthoptera *Dolichopoda geniculata*. This species finds idoneous habitat in the litter of the woods and even, during the summer, in the cellars.

ENDANGERED SPECIES. The Orthopteroid insect fauna of the Abruzzo, Lazio and Molise National Park is characterised by the presence of little and isolated populations of rare or interesting species. Endemic species, as well as wet-places species, seem to be more endangered and their conservation need direct protection. The influence of grazing (with an increasing number of cows) is very important too, both on vegetation and on the water sources management. The Centro Studi Ecologici Appenninici of the Abruzzo, Lazio and Molise National Park is working to update the checklist of all the fauna of the Park, to evaluate the Biodiversity and identify the most endangered species. On the basis of several researches the Centro Studi had started a new project about the wet habitats of the Park, using as bioindicators Orthopteroid insects too.

ORIGIN OF THE ORTHOPTEROID FAUNA OF THE ABRUZZO, LAZIO AND MOLISE NATIONAL PARK

During the glacial ages, glaciers cyclically covered much of this area. The alternate increasing and dissolution of glaciers, originated some peculiar mountain fauna, derived from Northern species. The species of the genus *Italopodisma*, *Italohippus* and *Chorthippus bruttius* have clearly quaternary origin. These species are typically mountain or wetland elements, isolated after glacier retirement. Consequently, many Apennine species are endemic to a single mountain or chain. During the glacial ages too, the lower level of the sea, permitted the migration of several Balkanic species (transadriatic species) toward the Italian peninsula; *Barbitistes yersini* and *Forficula obtusangula* are typical transadriatic species. Another interesting aspect is the presence of xerothermic areas on high altitude. In these habitats, termophilous species live not far from orophilous ones. Many termophilous species clearly seem to have climbed up again the valleys that extend from the coast to the centre of the Apennines. *Bacillus rossius* and *Clonopsis gallica* (Phasmatodea), *Phyllodromica marginata* (Blattaria), many Orthoptera (e. g.: *Tylopsis liliifolia*, *Decticus albifrons*, *Rhacocleis germanica*, *Saga pedo*, *Gryllus bimaculatus*, *Calliptamus barbarus*), *Euborellia moesta*, *Forficula*

decipiens and *F. pubescens* (Dermaptera) are termophilous species commonly present along the Apennine valleys. The combination of all these aspects, makes the fauna and flora of Central Apennines very rich and peculiar.

CONCLUSIONS

The Orthopteroid fauna of the Abruzzo, Lazio and Molise National Park is very rich in species and particularly important from the ecological and biogeographical point of view. The area of the Park hosts some elements typical of S Italy (e.g. *Ephippiger cavannai*, *Chorthippus bruttius* and *Forficula silana*), others typical of the Abruzzo Apennines (e.g. *Ephippiger ruffoi*, *Decticus aprutianus*, *Italopodisma* spp. and *Italohippus* sp.) and some boreo-alpine species (*Aeropus sibiricus sibiricus* and *Stauroderus scalaris scalaris*). Some problems arise from the anthropic impact in the Park, particularly the management of pastures and the maintenance of wet areas.

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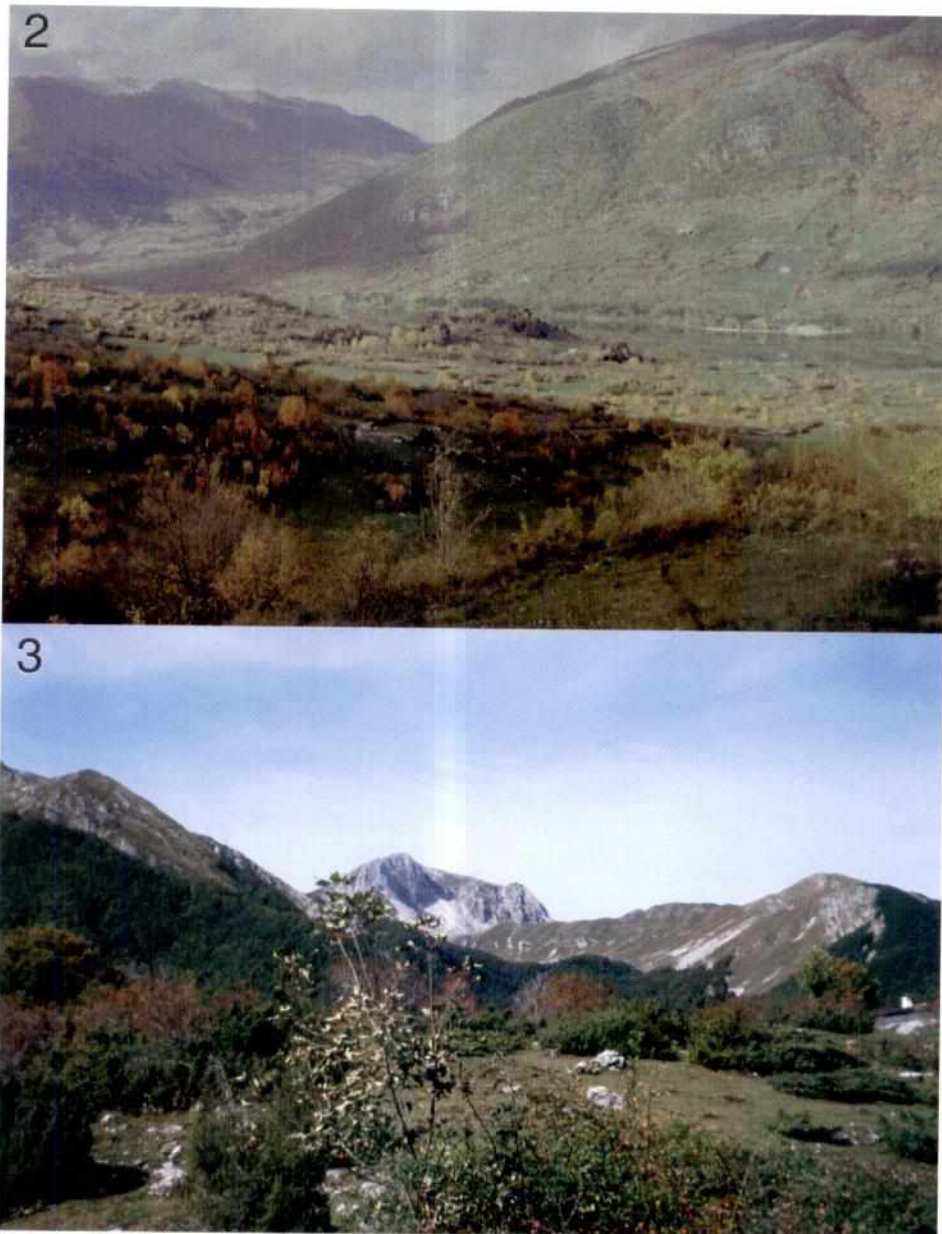
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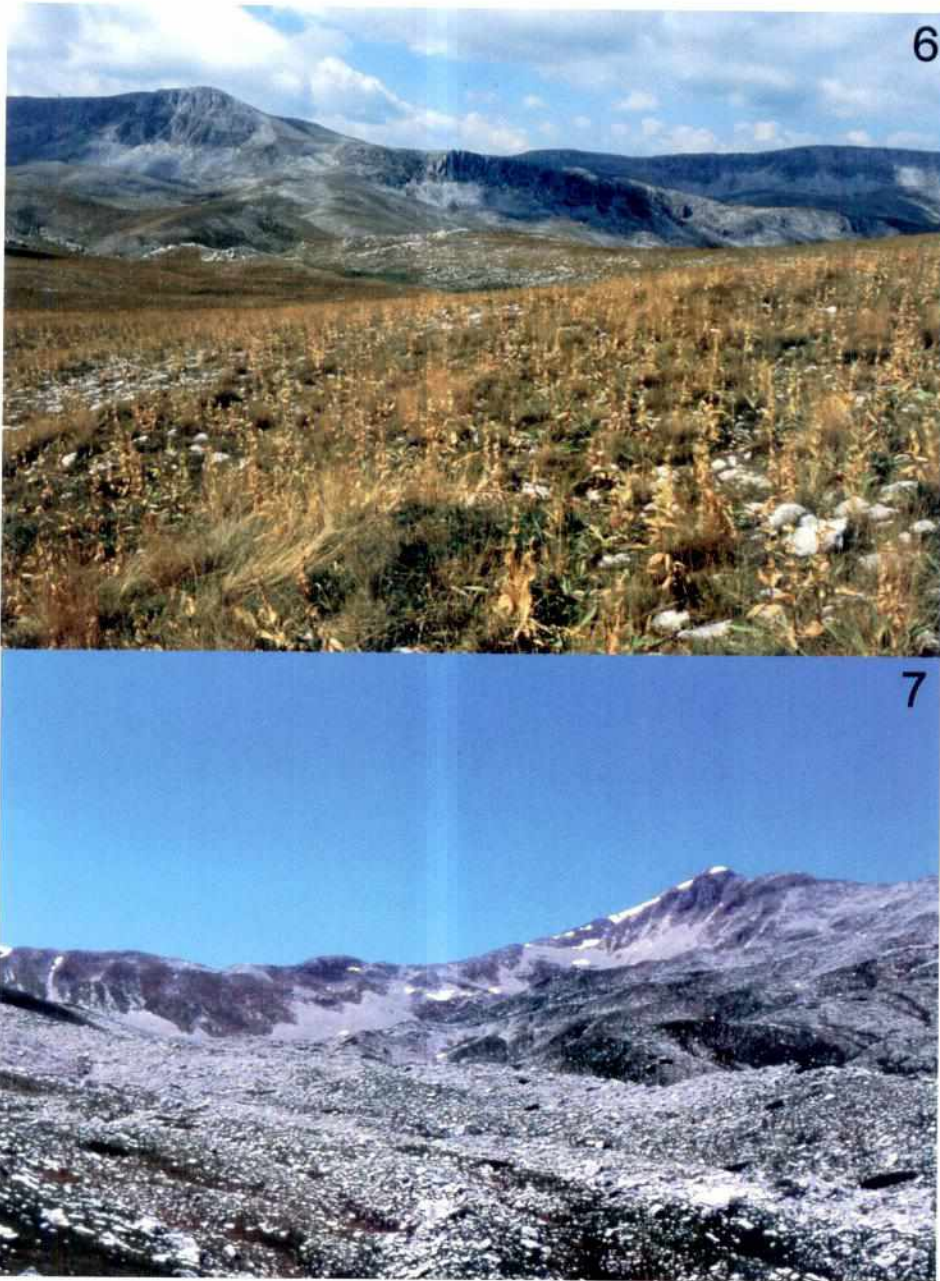
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Figs 2-3. 2 - Fiume Sangro valley: thermophilous slopes and wet habitats, (Photo by P. Curti); 3 - thermophilous bushy habitat at Valle Pagana, Monte Meta, (Photo by P. Tollis).



Figs 4-5. 4 - Subalpine pastures at Le Mainarde; 5 - Lago di Montagna Spaccata, 1050 m. (Photos by P. Curti).



Figs 6-7. 6 - Alpine habitat at Monte Greco, Toppe del Tesoro, 2100 m, (Photo by P. Fontana);
7 - xerophilous stony alpine habitat at Monte Tartaro, (Photo by P. Tollis).



Figs 8-9. 8 - *Barbitistes yersini*, male, Sperone; 9 - *Poecilimon superbus*, male, Passo Godi; (Photos by P. Fontana).



Figs 10-11. 10 - *Decticus aprutianus*, male, Passo Godi; 11 - *Ehippiger cavannai*, male, Colle della Croce; (Photos by P. Fontana).



Figs 12-13. 12 - *ItaloPodisma trapezoidalis trapezoidalis*, female, Lago Vivo; 13 - *ItaloPodisma trapezoidalis aprutiana*, mating male and female, Rif. Pesco di Iorio; (Photos by P. Fontana).



Figs 14-15. 14 - *Chorthippus brutius*, male, Pescasseroli, S.S. Marsicana Km 46; 15 - *Italohippus monticola*, male, Monte Rotondo; (Photos by P. Fontana).



Figs 16-17. 16 - *Glyptobothrus rubratibialis*, male, Monte delle Vitelle; 17 - *Clonopsis gallica*, female, Colle della Croce E, Alfedena; (Photos by P. Fontana).



Figs 18-19. 18 - *Pseudochelidura orsinii*, male, Rif. Pesco di Iorio; 19 - *Forficula silana*, male, Civitella Alfedena; (Photos by P. Fontana).