

# The butterfly fauna of the Italian Maritime Alps: results of the EDIT project

**Simona BONELLI**

(Corresponding author)

**Francesca BARBERO**

**Luca Pietro CASACCI**

**Cristiana CERRATO**

**Emilio BALLETO**

Department of Life Science and Systems Biology,  
Turin University, Via Accademia Albertina 13 10123, Turin (Italy)

[simona.bonelli@unito.it](mailto:simona.bonelli@unito.it)

[francesca.barbero@unito.it](mailto:francesca.barbero@unito.it)

[luca.casacci@unito.it](mailto:luca.casacci@unito.it)

[cri.entessa@virgilio.com](mailto:cri.entessa@virgilio.com)

[emilio.balletto@unito.it](mailto:emilio.balletto@unito.it)

Published on 27 March 2015

[urn:lsid:zoobank.org:pub:50A2BE48-F689-4577-A91C-9ADE9E9AF56E](http://urn:lsid:zoobank.org:pub:50A2BE48-F689-4577-A91C-9ADE9E9AF56E)

Bonelli S., Barbero F., Casacci L. P., Cerrato C. & Balletto E. 2015. — The butterfly fauna of the Italian Maritime Alps: results of the EDIT project, *in* Daugeron C., Deharveng L., Isaia M., Villemant C. & Judson M. (eds), *Mercantour/Alpi Maritime All Taxa Biodiversity Inventory*. *Zoosystema* 37 (1): 139-167. <http://dx.doi.org/10.5252/z2015n1a6>

## ABSTRACT

The Valdieri area (Italian Maritime Alps) has long been known for harbouring a large variety of Mediterranean and Alpine elements, often occurring together in an intricate pattern of co-habitations that is practically without equal elsewhere in the Alps. The area has been designated as a Site of Community Interest (SCI: "Argentera" IT1110053), has been listed among the 32 "Prime Butterfly Areas" occurring in Italy and is now considered a priority site for conservation. A large number of amateur and professional entomologists alike have visited the area over the years, generating a mass of information on the Valdierian butterflies. We carefully searched the "grey" literature for data on the butterflies and the burnet moths occurring in this area. Since the second half of the 19th Century, almost 100 papers and books have been dedicated, in whole or in part, to the description of this fauna, which currently includes many as 161 species. We sampled butterflies in 2008-2009 and found one previously unreported species. Here we provide an annotated checklist of the butterfly and burnet moth species occurring in the area, including comments on their ecology and distribution, as well as a complete list of the publications dealing with them.

## KEY WORDS

butterfly fauna,  
checklist,  
biodiversity,  
conservation,  
Maritime Alps,  
new record.

## RÉSUMÉ

*Les papillons diurnes des Alpes maritimes italiennes: résultats du programme EDIT.*

La zone de Valdieri (Alpes maritimes italiennes) est connue depuis longtemps pour sa richesse en éléments méditerranéens et alpins, dont les zones de cohabitations sont souvent fortement intriquées comme nulle part ailleurs dans les Alpes. C'est pourquoi cette zone a été désignée comme un Site d'Intérêt Communautaire (SIC: « Argentera » IT1110053), et classée parmi les 32 « Zones d'Importance primordiale

**MOTS CLÉS**  
faune de papillons,  
liste des espèces,  
biodiversité,  
conservation,  
Alpes maritimes,  
nouvelle signalisation.

pour les papillons » recensées en Italie; cette zone est maintenant considérée un site prioritaire pour la conservation de ces insectes. Un grand nombre d'entomologistes, amateurs aussi bien que professionnels, ont visité la région au fil des années, générant une grande masse d'informations sur les papillons diurnes. Nous avons fouillé attentivement la littérature « grise » contenant des données sur les papillons diurnes et les zygènes qui volent dans ce domaine. À partir de la seconde moitié du XIX<sup>e</sup> siècle presque 100 articles et livres ont été consacrés, en partie ou en totalité, à la description de la faune de papillons et de zygènes de la région de Valdieri, où au moins 161 espèces sont actuellement connues. En outre, nous avons échantillonné la faune de papillons en 2008-2009 et avons trouvé une espèce non observée par les auteurs précédents. Ici, nous fournissons une liste annotée des espèces de papillons et de zygènes présentes dans la zone, accompagnée par des commentaires sur leur écologie et leur distribution, ainsi qu'une liste complète des publications traitant de la faune de papillons diurnes et des zygènes présents dans la zone.

## INTRODUCTION

Italy is a country characterized by extremely high biodiversity, which we can observe in virtually all animal and plant groups (Balletto *et al.* 2007). At least in montane areas, this occurs in concomitance with relatively low human disturbance, in comparison with most other European countries (Balletto 2005).

In the NW of the country, peaks of the mountain chain representing the extreme south-western Alps and frequently surpassing 2000 m in elevation, occur close to the seaside, thereby generating very steep ecological gradients both on their southern, maritime (Ligurian) and northern, continental (Piedmontese) slopes. For this reason, the imposing traces of the Holocene ice cap of Mt. Marguareis come to overhang the Mediterranean woodlands from a horizontal distance of less than 20 km. Holm oak (*Quercus ilex* L.) formations often occur in a mixture with beech (*Fagus sylvatica* L.) and without the, elsewhere normal, interposition of deciduous oaks. Over time, the extremely peculiar ecological features of this area have created conditions for the formation of a number of relatively small refuge areas that allow the survival of many isolated animal and plant populations, which continued to thrive throughout the Holocene glacial periods (Balletto & Casale 1991). Probably as a consequence of this, the Valdieri area, together with the rest of the Ligurian and Maritime Alps, represents a well-known biodiversity hotspot, where a number of animal groups (butterflies, zygaenid moths, carabid beetles, reptiles and amphibians) show unusually high species richness and endemism (Balletto *et al.* 2010).

Partially because of this high biodiversity, the area has been designated as a Site of Communitarian Interest (SCI: "Argentera" IT1110053), listed among the 32 "Prime Butterfly Areas" occurring in Italy and considered a priority site for conservation (Balletto *et al.* 2003). The exceptionally large amount of information available on this fauna has sometimes prompted the focus of research to shift from simply faunistic to strictly ecological and several studies were devoted to the community ecology or auto-ecology of Valdierian butterflies (Balletto & Toso 1975; Balletto *et al.* 1977; 1982, Epstein 1980; Jutzeler 1993).

Information on the general area is abundant and dates back in time to the second half of the 19th Century (e.g., Ghiliani 1852, 1853; Curò 1874, 1880; Gianelli 1890, Casagrande & Manzone 1890). Some papers were explicitly aimed at illustrating this particular fauna, such as those by Turati & Verity (1911, 1912) and Harris (1938). A large number of amateur and professional entomologists alike have visited the area along the years, generating a mass of information on the Valdierian butterflies. The most relevant papers include Verity (1905-11, 1911, 1914, 1916, 1919, 1920, 1922, 1928a, b, 1931, 1932, 1938, 1939, 1940-1953); Turati (1909, 1910, 1911, 1914a, b, 1919, 1923); Fruhstorfer (1910, 1917, 1918, 1920, 1923, 1924); Rocci (1911, 1912, 1914, 1919); Reverdin (1917); Verity & Querci (1924); Wehrli (1924); Bang-Haas (1926); Bryk (1935); Harris (1935); Rocca (1950); Eisner (1956, 1957, 1974, 1975, 1976); Storace (1956a, b, 1961); de Lesse (1959); Wolfsberger (1960); Dujardin (1964, 1965, 1969); Baldizzone (1964, 1965, 1966, 1971a, b); Floriani (1965); Daniel (1968); Eitschberger & Reissinger (1971); Gallo (1973, 1978); Balletto & Toso (1978); Eitschberger (1983); Kudrna (1983); Kudrna & Balletto (1984); Balletto *et al.* (1985); Balletto & Kudrna (1985, 1986); Ortali & Bertaccini (1987); Leigheb *et al.* (1987); Reissinger (1971, 1974, 1989); David & Sanetra (1994); Balletto (1995); Cupedo (1996, 1997); Arnscheid (2000); Nisaka (2000); Gianti & Gallo (2002); Parenzan & Porcelli (2007) and Hellmann & Parenzan (2010).

Excluding many more general papers, at least 96 journal articles and books have been dedicated, in whole or in part, to the description of the butterflies and the burnet moths of the mountains of the Valdieri area, where as many as 161 species (viz. 129 Papilionoidea Latreille, 1806; 18 Hesperioidea Latreille, 1809 and 14 Zygaenoidea Latreille, 1809) have been found to occur.

During our two-year field study, we collected 97 butterfly species at seven representative sites. One species proved to be a new record for the Valdieri area, thus increasing the list for this area to 162 species of diurnal Lepidoptera.

## MATERIAL AND METHODS

## BIBLIOGRAPHY

Among the many activities undertaken for the purpose of the EDIT project, in detail for ATBIs (All Taxa Biodiversity Inventories), we carefully searched the “grey” literature for data on the butterflies and burnet moths occurring in the surroundings of Valdieri.

## COLLECTION

From June to August (2008-2009) we sampled butterflies at seven selected sites, scattered across the Valdieri area. We did not sample burnet moths.

– Site 1: Natural Reserve of *Juniperus phoenicea* L. (878 m). A dry grassland sampled in 2008.

– Site 2: Subalpine pastures of “Pian della Casa” (1650 m). Sampled in 2008.

– Site 3: Fishing reserve “Cappello di Napoleone” – Beech-wood clearings at 1300 m. Sampled in 2009.

– Sites 4-7: Valasco valley. We selected 4 sampling areas along an altitudinal gradient (1600-1900 m) to cover different habitat types. Specifically, these were: 4) subalpine heathland (*Rhododendron* L.) at 1690 m; 5) hygrophilous grassland at 1750 m; 6) *Juniperus* heathland/grassland at 1790 m and 7) rocky slopes and screes at 1900 m. All these sites were sampled in 2009.

Butterflies were sampled by linear transects (Pollard & Yates 1993) under weather conditions suitable for insect activity. Most of the specimens were identified in the field and a small number (generally one male and one female) were gathered to provide a reference collection. Habitats Directive species were not collected. The material is deposited in the general collection of our laboratory (DBIOS).

## BIOLOGICAL DATA

For each listed species we report the following information: the first record for the Valdieri area, the chorotype (following Balletto *et al.* 2007), the general ecological requirements of the species and records obtained during our two year field study (site and time of the year). The ecological requirements of burnet moths are based on the information provided by Balletto *et al.* (2007) and Naumann *et al.* (1999). In the case of butterflies, each species was schematically characterised by its ecological requirements as described in Balletto & Kudrna (1985) and subsequent modifications. We considered four characteristics: 1) general habitat requirements (nemoral, subnemoral, open herbaceous, screes); 2) altitudinal preferences (listing the altitudinal range of each species); 3) thermal preferences (eurythermic, microthermic, mesophilous, thermophilous) and 4) ground-water preferences (eurychorous, hygrophilous, mesophilous, xerophilous). For the vegetational cover of habitats, we classify nemoral and subnemoral species separately because, even though both are more or less linked to woodlands, the latter spend only a relatively short part of the day (normally the hottest) in the wood itself, whereas they generally forage in the surrounding grasslands or meadows.

## ABBREVIATIONS

CS	Collected specimens;
Lhp	larval host plant;
MRSN	Museo Regionale di Scienze Naturali, Turin;
OS	observed specimens.

## RESULTS

On 6th August 2008, one adult of *Minois dryas* (Scopoli, 1763) was collected at the natural reserve of *Juniperus phoenicea*. This is a xerothermic site, at 878 m, protected because of the presence of this restricted thermophilous plant, representing the highest and northernmost population of this plant in Italy. This record is reported in the following species list as “new record”.

The observed species richness at the sites were: 42 species in the Natural Reserve of *Juniperus phoenicea* (site 1); 27 species in the pastures of “Pian della Casa” (site 2); 50 species in the beech-wood clearing around the fishing reserve of “Cappello di Napoleone” (site 3); 52 species in the subalpine heathland (*Rhododendron* – 1690 m) at Valasco (site 4); 28 species in the Valasco hygrophilous grassland at 1750 m (site 5); 50 species in the *Juniperus* heathland/grassland (1790 m) of Valasco (site 6); 33 species in the Valasco rocky slopes and screes (site 7).

The following list of the species observed in the Valdieri area follows the arrangement in Balletto *et al.* (2014), where all data on authorship, original combinations and references can be found, together with the synonyms most frequently used in the literature.

Superfamily ZYGAENOIDEA Latreille, 1809

Family ZYGAENIDAE Latreille, 1809

Subfamily PROCRIDINAE Boisduval, 1829

Genus *Adscita* Retzius, 1783

*Adscita alpina* (Alberti, 1937)

*Procris alpina* Alberti, 1937: 435.

FIRST RECORD FOR THE VALDIERI AREA. — Verity (1946).

CHOROTYPE. — Alpine.

ECOLOGY. — Natural and semi-natural open herbaceous areas. Larval host plants belong to the genus *Rumex*. In flight from May to August.

*Adscita statices* (Linnaeus, 1758)

*Sphinx statices* Linnaeus, 1758: 495.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1912).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Natural and semi-natural open herbaceous areas. In Italy, it is recorded only from a few localities in the Alps, below 1500 m (Naumann *et al.* 1999). Lhp are *Rumex acetosa* and *Rumex acetosella*.

*Adscita globulariae* (Hübner, 1793)

*Sphinx globulariae* Hübner, 1793: Sphinges, pl. 1, figs 2, 3.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1912).

CHOROTYPE. — Turanic-European.

ECOLOGY. — Natural and semi-natural open herbaceous areas. Ecological differences within this range have been recorded, depending on the population. In northern Italy this species is restricted to dry, grassy and flowery sites (Naumann *et al.* 1999). Lhp are mainly *Centaurea* species. In flight from May to July.

NOTE. — In the area only reported from upper Vallon de Mollières, at 2300 m, very close to the border between Italy and France.

Subfamily ZYGAENINAE Latreille, 1809  
Genus *Zygaena* Fabricius, 1775

*Zygaena carniolica* (Scopoli, 1763)

*Sphinx carniolica* Scopoli, 1763: 189.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1912).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Natural and semi-natural open herbaceous areas. It is usually present in dry, calcareous biotopes (Naumann *et al.* 1999). Lhp are *Anthyllis* and *Astragalus*.

*Zygaena charon* (Hübner, 1796)

*Sphinx charon* Hübner, 1796: Sphinges, pl. 4, fig. 21.

FIRST RECORD FOR THE VALDIERI AREA. — Balletto E. 1976 pers. coll. (Valdieri, 900 m).

CHOROTYPE. — S European.

ECOLOGY. — Natural and semi-natural open herbaceous areas. Some authors consider it to be a subspecies of *Zygaena viciae*, which is restricted to the Alpes-de-Haute-Provence, south-western Alps and north-western Italy (Naumann *et al.* 1999). Known lhp for the subspecies belong to the genera *Lathyrus* and *Trifolium*.

*Zygaena ephialtes* (Linnaeus, 1767)

*Sphinx ephialtes* Linnaeus, 1767: 806.

FIRST RECORD FOR THE VALDIERI AREA. — Balletto E. 1989 pers. coll. (Valdieri, 900 m).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — In proximity to broadleaved forests. Known lhp is *Coronilla emerus*.

*Zygaena exulans* (Hohenwarth, 1792)

*Sphinx exulans* Hohenwarth, 1792: 265.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1912).

CHOROTYPE. — Centralasiatic-European (orophilous).

ECOLOGY. — Natural and semi-natural open herbaceous areas. It is an oreol species, which in the Alps mainly inhabits *Carex*-meadows (Naumann *et al.* 1999). Polyphagous.

*Zygaena filipendulae* (Linnaeus, 1758)

*Sphinx filipendulae* Linnaeus, 1758: 494.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1912).

CHOROTYPE. — Turanic-European.

ECOLOGY. — Natural and semi-natural open herbaceous areas. It inhabits a variety of habitats from open woodland to alpine meadows (Naumann *et al.* 1999). Known lhp belong to the genera *Lotus* and *Dorycnium*.

*Zygaena loniceriae* (Scheven, 1777)

*Sph.[inx] loniceriae* Scheven, 1777: 97.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1912).

CHOROTYPE. — Sibiric-European.

ECOLOGY. — Natural and semi-natural open herbaceous areas. It is an altitudinal generalist (0-2000 m) and can be found from coastal areas to open woodland and subalpine meadows (Naumann *et al.* 1999). Known lhp belong to the genera *Coronilla* and *Hippocrepis*.

*Zygaena loti* ([Denis & Schiffermüller], 1775)

*Sphinx loti* [Denis & Schiffermüller], 1775: 45.

FIRST RECORD FOR THE VALDIERI AREA. — Balletto E. 1976 pers. coll. (Valdieri, 800 m).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Natural and semi-natural open herbaceous areas. Euryoecious species that occurs in meadows, woodland clearings and subalpine slopes (Naumann *et al.* 1999). Known lhp belong to the genus *Astragalus*.

*Zygaena purpuralis* (Brünnich, 1763)

*Sphinx purpuralis* Brünnich, 1763: 686.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1912).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Natural and semi-natural open herbaceous areas. Altitudinal generalist, from coastal region to alpine meadows (0-2000 m); very common (Naumann *et al.* 1999). Known lhp are *Thymus vulgaris*, *T. serpyllum*, *Satureja*.



*Zygaena romeo* Duponchel, 1835*Zygaena romeo* Duponchel, 1835: 131.

FIRST RECORD FOR THE VALDIERI AREA. — Balletto E. 1989 pers. coll. (Terme di Valdieri, 1300 m).

CHOROTYPE. — S European.

ECOLOGY. — broadleaved forests, shady clearings. It usually occurs in local and small colonies (Naumann *et al.* 1999). Known lhp are *Lathyrus*, *Vicia*.*Zygaena transalpina* (Esper, 1780)*Sphinx transalpina* Esper, 1780: 196.

FIRST RECORD FOR THE VALDIERI AREA. — Turati (1910).

CHOROTYPE. — S European.

ECOLOGY. — In vicinity of broadleaved and coniferous forests. One of the most common *Zygaenidae* in the southern Alps and in Italy (Naumann *et al.* 1999). Known lhp belong to the genus *Astragalus*.*Zygaena vesubiana* Le Charles, 1933*Zygaena brizae* ssp. *vesubiana* Le Charles, 1933: 253.

FIRST RECORD FOR THE VALDIERI AREA. — Turati &amp; Verity (1912).

CHOROTYPE. — W Alpine.

ECOLOGY. — Natural and semi-natural open herbaceous areas. This taxon is considered by some authors to be a subspecies of *Zygaena brizae* (Esper, 1800), which is restricted to south-eastern France and north-western Italy, where it has been recorded only in the region of Piedmont, Val d'Aosta and Liguria (Naumann *et al.* 1999; Hellmann *et al.* 1999). Known lhp is *Cirsium arvense* (L.) Scop.

Superfamily HESPERIOIDEA Latreille, 1809

Family HESPERIIDAE Latreille, 1809

Subfamily PYRGINAE Burmeister, 1878

Genus *Pyrgus* Hübner, [1819]*Pyrgus accretus* (Verity, 1925)*Hesperia alveus accreta* Verity, 1925: 55.

FIRST RECORD FOR THE VALDIERI AREA. — Balletto E. 1989 pers. coll. (Valdieri, 900 m).

CHOROTYPE. — SW European.

ECOLOGY. — Open herbaceous, lower-upper montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

*Pyrgus carlinae* (Rambur, [1839])*Hesperia carlinae* Rambur, [1839]: 314.

FIRST RECORD FOR THE VALDIERI AREA. — Turati &amp; Verity (1911).

CHOROTYPE. — Alpine.

ECOLOGY. — Open herbaceous, lower montane-subalpine, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Valasco, Hygrophilous grassland 1750 m, VII-VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009, CS.*Pyrgus carthami* (Hübner, [1813])[*Papilio*] *carthami* Hübner, [1813]: pl. 143, figs 726 [recte 720-723].

FIRST RECORD FOR THE VALDIERI AREA. — Turati &amp; Verity (1911).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnival, lower-upper montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, Hygrophilous grassland 1750 m, VI.2009, CS.*Pyrgus cacaliae* (Rambur, 1839)*Hesperia cacaliae* Rambur, [1839]: 313.

FIRST RECORD FOR THE VALDIERI AREA. — Harris (1938).

CHOROTYPE. — Alps, Pyrenees.

ECOLOGY. — Open herbaceous, subalpine-alpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

*Pyrgus onopordi* (Rambur, 1839)*Hesperia onopordi* Rambur, [1839]: 319.

FIRST RECORD FOR THE VALDIERI AREA. — Verity (1940).

CHOROTYPE. — W Mediterranean.

ECOLOGY. — Open herbaceous, lower-upper montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

*Pyrgus foulquieri* (Oberthür, 1910)*Syrictus alveus* [f.] *foulquieri* Oberthür, 1910: 404.

FIRST RECORD FOR THE VALDIERI AREA. — Warren (1926).

CHOROTYPE. — SW European.

ECOLOGY. — Open herbaceous, lower-to-upper montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

*Pyrgus serratulae* (Rambur, [1839])

*Hesperia serratulae* Rambur, [1839]: 318.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Open herbaceous, subalpine-alpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

*Pyrgus malvoides* (Elwes & Edwards, 1897)

*Hesperia malvoides* Elwes & Edwards, 1897: 160.

FIRST RECORD FOR THE VALDIERI AREA. — Verity (1940).

CHOROTYPE. — SW European.

ECOLOGY. — Subnemoral, lowland-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Spialia* Swinhoe, [1912]

*Spialia sertorius* (Hoffmannsegg, 1804)

*Papilio sertorius* Hoffmannsegg, 1804: 203.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — CS European.

ECOLOGY. — Open herbaceous, lowland-lower montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009, CS.

Genus *Carcharodus* Hübner, [1819]

*Carcharodus alceae* (Esper, [1780])

*P[apilio] alceae* Esper, [1780]: 1 (2) Forts. Tagschmett, 4.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Open herbaceous, lowland-lower montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

*Carcharodus floccifer* (Zeller, 1847)

*Hesperia floccifera* Zeller, 1847: 286.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Subnemoral, lowland-upper montane, eurythermic, eurychorous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VIII.2009; Subalpine scree, 1900 m, VII.2009, CS.

*Carcharodus lavatherae* (Esper, [1783])

*P[apilio] lavatherae* Esper, [1783]: 1 (2) Forts. Tagschmett., 148.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — European-Mediterranean.

ECOLOGY. — Open herbaceous, lowland-lower montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Valasco, *Rhododendron* heathland, 1690 m, VII.2009, CS.

Genus *Erynnis* Schrank, 1801

*Erynnis tages* (Linnaeus, 1758)

*Papilio tages* Linnaeus, 1758: 485.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Subnemoral, lowland-subalpine, eurythermic, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland, 878 m, VII.2008, CS.

Subfamily HESPERIINAE Latreille, 1809

Genus *Thymelicus* Hübner, [1819]

*Thymelicus acteon* (Rottemburg, 1775)

*Pap[ilio] acteon* Rottemburg 1775: 30.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Turanic-Mediterranean.

ECOLOGY. — Nemoral, lowland-lower montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

*Thymelicus lineola* (Ochsenheimer, [1808])

*Papilio lineola* Ochsenheimer, [1808]: 230.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Palaearctic (introduced in N America).

ECOLOGY. — Subnemoral, lowland-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Rhododendron*

heathland, 1690 m, VII-VIII.2009; Valasco, Hygrophilous grassland 1750 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VIII.2009, CS.

*Thymelicus sylvestris* (Poda, 1761)

[*Papilio*] *sylvestris* Poda, 1761: 79.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Euro-Mediterranean.

ECOLOGY. — Subnemoral, lowland-upper montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland, 878 m, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII-VIII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

Genus *Hesperia* Fabricius, 1793

*Hesperia comma* (Linnaeus, 1758)

*Papilio comma* Linnaeus, 1758: 484.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Holarctic.

ECOLOGY. — Open herbaceous, lowland-lower montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Valasco, *Rhododendron* heathland, 1690 m, VII.2009, CS.

Genus *Ochlodes* Scudder, 1872

*Ochlodes sylvanus* (Esper, [1777])

*Papilio sylvanus* Esper, [1777]: 1 (1) pl. 36, fig. 1, text [1779] 1 (4), 343.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnemoral, lowland-lower montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009, CS.

Superfamily PAPILIONOIDEA Latreille, [1802]

Family PAPILIONIDAE Latreille, [1802]

Subfamily PAPILIONINAE Latreille, [1802]

Genus *Iphiclides* Hübner, [1819]

*Iphiclides podalirius* (Linnaeus, 1758)

*Papilio podalirius* Linnaeus, 1758: 463.

FIRST RECORD FOR THE VALDIERI AREA. — MRSN 1984 (San Lorenzo di Valdieri, 850 m).

CHOROTYPE. — Centralasiatic-Euro-Mediterranean.

ECOLOGY. — Subnemoral, lowland-lower montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII-VIII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII.2009, CS.

Genus *Papilio* Linnaeus, 1758

*Papilio alexanor* Esper, [1800]

*P[apilio] alexanor* Esper, [1800]: Suppl. Theil 1, 89.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Subnemoral, lower-upper montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland, 878 m, VII.2008, OS.

*Papilio machaon* Linnaeus, 1758

*Papilio machaon* Linnaeus, 1758: 462.

FIRST RECORD FOR THE VALDIERI AREA. — Verity (1905-11).

CHOROTYPE. — Holarctic.

ECOLOGY. — Subnemoral, lowland-subalpine, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009, OS.

Subfamily PARNASSIINAE Duponchel, [1835]

Genus *Parnassius* Latreille, 1804

*Parnassius apollo* (Linnaeus, 1758)

(Fig. 1)

*Papilio apollo* Linnaeus, 1758: 465.

FIRST RECORD FOR THE VALDIERI AREA. — Verity (1905-11).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Scree, lower-upper montane, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland, 878 m, VII.2008; Pian della Casa, subalpine pastures, 1650, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII-VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009, OS.

*Parnassius mnemosyne* (Linnaeus, 1758)  
(Fig. 2)

*Papilio mnemosyne* Linnaeus, 1758: 465.

FIRST RECORD FOR THE VALDIERI AREA. — Turati (1909).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Subnemoral, upper montane-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI.2009, OS.

*Parnassius phoebus* (de Prunner, 1798)  
(see ICZN case 3637)

*Pap.[ilio] phoebus* de Prunner, 1798: 69.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Sibiric-European.

ECOLOGY. — Open herbaceous, subalpine-alpine, microthermic, hygrophilous.

EDIT PROJECT SAMPLING. — Not found.

Family PIERIDAE Duponchel, [1835]  
Subfamily PIERINAE Duponchel, [1835]  
Genus *Aporia* Hübner, [1819]

*Aporia crataegi* (Linnaeus, 1758)

*Papilio crataegi* Linnaeus, 1758: 467.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Palaearctic.

ECOLOGY. — Subnemoral, lowland-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VI-VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009, CS.

Genus *Pieris* Schrank, 1801

*Pieris brassicae* (Linnaeus, 1758)

*Papilio brassicae* Linnaeus, 1758: 467.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Palaearctic.

ECOLOGY. — Open herbaceous, lowland-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Fishing reserve Cappello di Napoleone,

Beech-wood clearings, 1300 m, VI.2009; Valasco, *Rhododendron* heathland, 1690 m, VI-VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

*Pieris bryoniae* (Hübner, [1806])

[*Papilio*] *bryoniae* Hübner, [1806]: text, foot note, 62.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Alpine-Anatolian (orophilous).

ECOLOGY. — Subnemoral, subalpine, microthermic, mesophilous.

EDIT PROJECT SAMPLING. — Valasco, *Rhododendron* heathland, 1690 m, VI.2009, CS.

*Pieris callidice* (Hübner, [1800])

[*Papilio*] *callidice* Hübner, [1800]: Papiliones, pl. 81, figs 408, 409.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Sibiric-European.

ECOLOGY. — Open herbaceous, alpine, microthermic, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

*Pieris daplidice* (Linnaeus, 1758)

*Papilio daplidice* Linnaeus, 1758: 468.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — W Mediterranean.

ECOLOGY. — Subnemoral, lowland-lower montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VI.2009, CS.

*Pieris manni* (Mayer, 1851)

*Pont.[ia] manni* Mayer, 1851: 151.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — S Euro-Mediterranean.

ECOLOGY. — Subnemoral, lowland-lower montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Valasco, Hygrophilous grassland 1750 m, VI-VII.2009, CS.

*Pieris napi* (Linnaeus, 1758)

*Papilio napi* Linnaeus, 1758: 468.





FIG 1. — *Parnassius apollo* (Linnaeus, 1758). Photograph: Davide Piccoli.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-Euro-Mediterranean.

ECOLOGY. — Subnemoral, lowland-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m (Jun- Aug. 2009; Valasco, *Rhododendron* heathland, 1690 m, VI-VII.2009; Valasco, Hygrophilous grassland 1750 m, VI-VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VI-VII.2009; Valasco, Subalpine scree, 1900 m, VI.2009, CS.

*Pieris rapae* (Linnaeus, 1758)

*Papilio rapae* Linnaeus, 1758: 468.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Palearctic.

ECOLOGY. — Open herbaceous, lowland-subalpine, eurytherm, undetermined.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Pian della Casa, subalpine pastures

1650, VII-VIII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI-VIII.2009; Valasco, *Rhododendron* heathland, 1690 m, VI-VIII.2009; Valasco, Hygrophilous grassland 1750 m, VI-VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII-VIII.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

Genus *Anthocharis*

Boisduval, Rambur & Graslin, [1833]

*Anthocharis cardamines* (Linnaeus, 1758)

*Papilio cardamines* Linnaeus, 1758: 468.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Palearctic.

ECOLOGY. — Subnemoral, lowland-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI-VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VI.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VI.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

Genus *Euchloe* Hübner, [1819]

*Euchloe tagis* (Hübner, [1804])

[*Papilio*] *tagis* Hübner, [1804]: Papiliones, pl. 110, figs 565, 566.

FIRST RECORD FOR THE VALDIERI AREA. — Cameron-Curry *et al.* (1983).

CHOROTYPE. — SW European and N Africa.

ECOLOGY. — Screes, lower montane-subalpine, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

*Euchloe ausonia* (Hübner, 1804)

[*Papilio*] *ausonia* Hübner, 1804: 64.

FIRST RECORD FOR THE VALDIERI AREA. — Balletto E. 1976 pers. coll. (Valdieri, 900 m).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — lower-montane, open herbaceous, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Subfamily COLIADINAE Swainson, 1827

Genus *Colias* Fabricius, 1807

*Colias alfacariensis* Ribbe, 1905

*Colias hyale alfacariensis* Ribbe, 1905: 137.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Turanic-European.

ECOLOGY. — Open herbaceous, lowland-upper montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008, CS.

*Colias crocea* (Fourcroy, 1785)

*Papilio croceus* Fourcroy, 1785: 250.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Turanic-Euro-Mediterranean.

ECOLOGY. — Subnemoral, lowland-lower montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Valasco, *Rhododendron* heathland, 1690 m, VI-VII.2009; Valasco, Hygrophilous grassland 1750 m, VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009; Valasco, Subalpine scree, 1900 m, VI.2009, CS.

*Colias phicomone* (Esper, [1780])

*P.[apilio] phicomone* Esper, [1780]: Forts. Tagschmett., 32.

FIRST RECORD FOR THE VALDIERI AREA. — Gianelli (1890).

CHOROTYPE. — S European (orophilous).

ECOLOGY. — Open herbaceous, subalpine-alpine, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Gonepteryx* [Leach], [1815]

*Gonepteryx cleopatra* (Linnaeus, 1767)

*Papilio cleopatra* Linnaeus, 1767: 765.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Mediterranean.

ECOLOGY. — Subnemoral, Mediterranean to lower montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII.2009, OS.

*Gonepteryx rhamni* (Linnaeus, 1758)

*Papilio rhamni* Linnaeus, 1758: 470.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-Euro-Mediterranean.

ECOLOGY. — Subnemoral, lowland-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI-VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII-VIII.2009; Valasco, Hygrophilous grassland 1750 m, VI.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VI-VII.2009, OS.

Subfamily DISMORPHIINAE Schatz, 1887

Genus *Leptidea* Billberg, 1820

*Leptidea juvernica* Williams, 1946

*Leptidea sinapis juvernica* Williams, 1946: 79.

FIRST RECORD FOR THE VALDIERI AREA. — Gianti & Gallo (2002) (as *Leptidea reali*).

This species was initially recorded as *Leptidea reali* Reissinger, 1990.

For the moment, the occurrence in Italy of *L. juvernica* is based on a small number of specimens from the E Alps (V. Dincă, in litt.). The “non *L. sinapis* populations” of C Italy have been demonstrated to represent *L. reali* (Dincă *et al.* 2011, 2013). In N Italy, 25 “non





FIG 2. — *Parnassius mnemosyne* (Linnaeus, 1758). Photograph: Davide Piccoli.

*L. sinapis* populations” have been recorded, but no molecular data are currently available for the Valdieri area. However, *L. juvernica* is known to occur at least in NE Italy, at the Val di Tovo lakes (Dincă *et al.* 2011, 2013).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Subnemoral, lower to upper montane, mesophilous, mesophilous.

*Leptidea sinapis* (Linnaeus, 1758)

*Papilio sinapis* Linnaeus, 1758: 468.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Subnemoral, lowland-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VI.2009, CS.

Family RIODINIDAE Grote, 1895  
Subfamily HAMEARINAE Clench, 1955  
Genus *Hamearis* Hübner, [1819]

*Hamearis lucina* (Linnaeus, 1758)

*Papilio lucina* Linnaeus, 1758: 480.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Euro-Anatolian.

ECOLOGY. — Subnemoral, lower-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI.2009, CS.

Family LYCAENIDAE [Leach], [1815]  
Subfamily LYCAENINAE [Leach], [1815]  
Tribe LYCAENINI [Leach], [1815]  
Genus *Lycaena* Fabricius, 1807

*Lycaena alciphron* (Rottemburg, 1775)

*Pap.[ilio] alciphron* Rottemburg, 1775: 11.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-Euro-Mediterranean.

ECOLOGY. — Subnemoral, lower-upper montane, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII-VIII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009; Valasco, Subalpine scree, 1900 m, VIII.2009, CS.

*Lycaena eurydame* (Hoffmannsegg, 1806)

*Papilio eurydame* Hoffmannsegg, 1806: 178.

FIRST RECORD FOR THE VALDIERI AREA. — Gianelli (1890).

CHOROTYPE. — Alpine.

ECOLOGY. — Subnemoral, upper montane-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Valasco, Hygrophilous grassland 1750 m, VII-VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII-VIII.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

*Lycaena phlaeas* (Linnaeus, 1761)

*Papilio phlaeas* Linnaeus, 1761: 285.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Holarctic-Afrotropical.

ECOLOGY. — Subnemoral, lowland-upper montane, thermophilous, eurychorous.

EDIT PROJECT SAMPLING. — Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009, CS.

*Lycaena subalpina* Speyer, 1851

*Polyommatus circe* var. *subalpina* Speyer, 1851: 339.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Alpine.

ECOLOGY. — Subnemoral, upper montane-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Valasco, *Rhododendron* heathland, 1690 m, VI-VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VI-VII.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

*Lycaena tityrus* (Poda, 1761)

[*Papilio*] *tityrus* Poda, 1761: 77.

FIRST RECORD FOR THE VALDIERI AREA. — Harris (1938).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Subnemoral, lowland-upper mountain, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008, CS.

*Lycaena virgaureae* (Linnaeus, 1758)

*Papilio virgaureae* Linnaeus, 1758: 484.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Sibiric-European.

ECOLOGY. — Subnemoral, upper montane-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII-VIII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII-VIII.2009; Valasco, Hygrophilous grassland 1750 m, VII-VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII-VIII.2009; Valasco, Subalpine scree, 1900 m, VII-VIII.2009, CS.

Tribe THECLINI Swainson, 1831

Genus *Satyrium* Scudder, 1876

*Satyrium spini* ([Denis & Schiffermüller], 1775)

[*Papilio*] *spini* [Denis & Schiffermüller], 1775: 186.

FIRST RECORD FOR THE VALDIERI AREA. — MRSN 1966 (Valdieri, 900 m).

CHOROTYPE. — Turanic-European.

ECOLOGY. — Subnemoral, lowland-lower montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008, CS.

*Satyrium pruni* (Linnaeus, 1758)

*Papilio pruni* Linnaeus, 1758: 482.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnemoral, lowland-lower montane, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Favonius* Sibatani & Ito, 1942

*Favonius quercus* (Linnaeus, 1758)

*Papilio quercus* Linnaeus, 1758: 482.

FIRST RECORD FOR THE VALDIERI AREA. — Baldizzone (1964).

CHOROTYPE. — Turanic-S Euro-Mediterranean.

ECOLOGY. — Nemoral, lowland-lower montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Callophrys* Billberg, 1820

*Callophrys rubi* (Linnaeus, 1758)

*Papilio rubi* Linnaeus, 1758: 482.

FIRST RECORD FOR THE VALDIERI AREA. — Balletto *et al.* (1982).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnemoral, lowland-subalpine, eurytherm, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Tribe POLYOMMATINI Swainson, 1827

Genus *Cupido* Schrank, 1801

*Cupido minimus* (Fuessly, 1775)

*Papilio minimus* Fuessly, 1775: 31.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Open herbaceous, lowland-upper montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Celastrina* Tutt, 1906

*Celastrina argiolus* (Linnaeus, 1758)

*Papilio argiolus* Linnaeus, 1758: 483.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Holarctic.

ECOLOGY. — Nemoral, lowland-lower montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Scolitantides* Hübner, [1819]

*Scolitantides orion* (Pallas, 1771)

*Papilio orion* Pallas, 1771: 471.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnemoral, lower montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Pseudophilotes* Beuret, 1958

*Pseudophilotes baton* (Bergsträsser, 1779)

[*Papilio*] *baton* Bergsträsser, 1779: 18.

FIRST RECORD FOR THE VALDIERI AREA. — MRSN 1966 (Valdieri, 900 m).

CHOROTYPE. — S European.

ECOLOGY. — Subnemoral, lowland-lower montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Iolana* Bethune-Baker, 1914

*Iolana iolas* (Ochsenheimer, 1816)

*Lycaena iolas* Ochsenheimer, 1816: 144.

FIRST RECORD FOR THE VALDIERI AREA. — Balletto E. 1990 pers. coll. (Valdieri, 900 m).

CHOROTYPE. — SE European.

ECOLOGY. — Subnemoral, lower montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Glaucopsyche* Scudder, 1872

*Glaucopsyche alexis* (Poda, 1761)

[*Papilio*] *alexis* Poda, 1761: 77.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centroasiatic-Euro-Mediterranean.

ECOLOGY. — Subnemoral, lowland-lower montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Maculinea* van Eecke, 1915

*Maculinea arion* (Linnaeus, 1758)

*Papilio arion* Linnaeus, 1758: 483.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Subnemoral, lower-upper montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650 m, VII-VIII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.



Genus *Lampides* Hübner, [1819]

*Lampides boeticus* (Linnaeus, 1767)

*Papilio boeticus* Linnaeus, 1767: 789.

FIRST RECORD FOR THE VALDIERI AREA. — Baldizzone (1971a).

CHOROTYPE. — Palaearctic, Afrotropical, Indo-Australian (migratory).

ECOLOGY. — Subnemoral, lowland-lower montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Plebejus* Kluk, 1802

*Plebejus argus* (Linnaeus, 1758)

*Papilio argus* Linnaeus, 1758: 483.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Sibiric-European (to Japan).

ECOLOGY. — Open herbaceous, lowland-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII-VIII.2008; Pian della Casa, subalpine pastures 1650 m, VII-VIII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII-VIII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII-VIII.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

Genus *Lycaeides* Hübner, [1819]

*Lycaeides idas* (Linnaeus, 1761)

*Papilio idas* Linnaeus, 1761: 284.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Open herbaceous, lowland-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, *Juniperus* L. heathland/grassland, 1790 m, VII.2009; Valasco, Subalpine scree, 1900 m, VII-VIII.2009, CS.

*Lycaeides argyrognomon* (Bergsträsser, 1779)

[*Papilio*] *argyrognomon* Bergsträsser, 1779: 76.

FIRST RECORD FOR THE VALDIERI AREA. — Parenzan P. 1974 pers. coll. (Valdieri, see Hellmann & Parenzan 2010).

CHOROTYPE. — European.

ECOLOGY. — Open herbaceous, lower montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Aricia* [Reichenbach], 1817

*Aricia agestis* ([Denis & Schiffermüller], 1775)

*P[apilio]* *agestis* [Denis & Schiffermüller], 1775: 184.

FIRST RECORD FOR THE VALDIERI AREA. — Verity (1928a).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnemoral, lowland-lower montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII-VIII.2008; Subalpine scree, 1900 m, VII.2009, CS.

*Aricia allous* (Geyer, [1837])

[*Papilio*] *alloüs* [sic!] Geyer, [1837]: 200.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — European.

ECOLOGY. — Subnemoral, lower montane-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Valasco, *Juniperus* heathland/grassland, 1790 m, VII-VIII.2009, CS.

*Aricia nicias* (Meigen, 1830)

*Polyommatus nicias* Meigen, 1830: 10.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Subnemoral, subalpine, microthermic, mesophilous.

EDIT PROJECT SAMPLING. — Valasco, *Rhododendron* heathland, 1690 m, VII-VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII-VIII.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

Genus *Eumedonia* Forster, 1938

*Eumedonia eumedon* (Esper, [1780])

*P[apilio]* *eumedon* Esper, [1780]: Forts. Tagschmett., 16.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnemoral, upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650 m, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI.2009; Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009; Valasco, Subalpine scree, 1900 m, 2009, CS.

Genus *Cyaniris* Dalman, 1816*Cyaniris semiargus* (Rottemburg, 1775)

*Pap.[ilio] semiargus* Rottemburg, 1775: 20.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Sibiric-European.

ECOLOGY. — Subnemoral, lower montane-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650 m, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII-VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009, CS.

Genus *Polyommatus* Latreille, 1804*Polyommatus bellargus* (Rottemburg, 1775)

*Pap.[ilio] bellargus* Rottemburg, 1775: 25.

FIRST RECORD FOR THE VALDIERI AREA. — MRSN 1974 (Valdieri, 980 m).

CHOROTYPE. — Turanic-European.

ECOLOGY. — Open herbaceous, lowland-upper montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008, CS.

*Polyommatus coridon* (Poda, 1761)

*[Papilio] coridon* Poda, 1761: 77.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — European.

ECOLOGY. — Open herbaceous, lower montane-subalpine, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Pian della Casa, subalpine pastures 1650, VII-VIII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VIII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII-VIII.2009; Valasco, Hygrophilous grassland 1750 m, VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VIII.2009; Valasco, Subalpine scree, 1900 m, VIII.2009, CS.

*Polyommatus damon*

([Denis & Schiffermüller], 1775)

*P.[apilio] damon* [Denis & Schiffermüller], 1775: 182.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Open herbaceous, lower-upper montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.



FIG 3. — *Maculinea arion* (Linnaeus, 1758). Photograph: Davide Piccoli.

*Polyommatus daphnis* ([Denis & Schiffermüller], 1775)

*P.[apilio] daphnis* [Denis & Schiffermüller], 1775: 182.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Turanic-European.

ECOLOGY. — Subnemoral, lower montane, thermophilous, meso-xerophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII-VIII.2008, CS.

*Polyommatus dorylas*

([Denis & Schiffermüller], 1775)

*P.[apilio] dorylas* [Denis & Schiffermüller], 1775: 322.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Euro-Anatolian.

ECOLOGY. — Open herbaceous, lower-upper montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII-VIII.2008, CS.

*Polyommatus escheri* (Hübner, [1823])

*[Papilio] escheri* Hübner, [1823]: Papiliones, pl. 160, figs 799, 800.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Euro-Mediterranean.

ECOLOGY. — Subnemoral, lowland-lower montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI-VIII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII-VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII-VIII.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

*Polyommatus icarus* (Rottemburg, 1775)

*Pap.[ilio] icarus* Rottemburg, 1775: 21.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnemoral, lowland-upper montane, eurytherm, eurychorous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII-VIII.2008; Pian della Casa, subalpine pastures 1650, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, Hygrophilous grassland 1750 m, VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII-VIII.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

*Polyommatus icarius* (Esper, [1789])

*Papilio icarius* Esper, [1789]: Suppl. Theil 1, 35.

FIRST RECORD FOR THE VALDIERI AREA. — Baldizzone (1971a).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnemoral, lower to upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

*Polyommatus thersites* (Cantener, 1834)

[*Argus*] *thersites* Cantener, 1834: 53.

FIRST RECORD FOR THE VALDIERI AREA. — MRSN 1976 (Valdieri, 900 m).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Open herbaceous, lowland-upper montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

*Polyommatus eros* (Ochsenheimer, 1808)

*Papilio eros* Ochsenheimer, 1808: 42.

FIRST RECORD FOR THE VALDIERI AREA. — Harris (1938).

CHOROTYPE. — Siberic-European.

ECOLOGY. — Open herbaceous, upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Family NYMPHALIDAE Swainson, 1827  
Subfamily NYMPHALINAE Swainson, 1827  
Genus *Nymphalis* Kluk, 1802

*Nymphalis antiopa* (Linnaeus, 1758)

*Papilio antiopa* Linnaeus, 1758: 476.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Holarctic.

ECOLOGY. — Subnemoral, lowland-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

*Nymphalis polychloros* (Linnaeus, 1758)

*Papilio polychloros* Linnaeus, 1758: 477.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-Euro-Mediterranean.

ECOLOGY. — Subnemoral, lowland-upper montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Inachis* Hübner, [1819]

*Inachis io* (Linnaeus, 1758)

*Papilio io* Linnaeus, 1758: 472.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnemoral, lowland-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008, OS.

Genus *Vanessa* Fabricius, 1807

*Vanessa atalanta* (Linnaeus, 1758)

*Papilio atalanta* Linnaeus, 1758: 478.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Holarctic (introduced to Haiti, Hawaii, Bermuda, New Zealand).

ECOLOGY. — Subnemoral, lowland-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650, VIII.2008; Valasco, *Rhododendron* heathland, 1690 m, VI-VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VI-VII.2009, CS.

*Vanessa cardui* (Linnaeus, 1758)

*Papilio cardui* Linnaeus, 1758: 475.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Sub-Cosmopolite.

ECOLOGY. — Open herbaceous, lowland-subalpine, mesophilous, eurychorous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI-VIII.2009; Valasco, *Rhododendron* heathland, 1690 m, VI-VIII.2009; Valasco, Hygrophilous grassland 1750 m, VI-VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VI-VIII.2009; Valasco, Subalpine scree, 1900 m, VI-VIII.2009, OS.

Genus *Aglais* Dalman, 1816

*Aglais urticae* (Linnaeus, 1758)

*Papilio urticae* Linnaeus, 1758: 477.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Open herbaceous, lowland-alpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650, VII.2008; Valasco, *Rhododendron* heathland, 1690 m, VI-VII.2009; Valasco, Hygrophilous grassland 1750 m, VI.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VI-VII.2009; Valasco, Subalpine scree, 1900 m, VII-VIII.2009, OS.

Genus *Polygonia* Hübner, [1819]

*Polygonia c-album* (Linnaeus, 1758)

*Papilio c-album* Linnaeus, 1758: 477.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-Euro-Mediterranean.

ECOLOGY. — Subnemoral, lowland-lower montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VIII.2009; Valasco, *Rhododendron* heathland, 1690 m, VI.2009, CS.

Genus *Melitaea* Fabricius, 1807

*Melitaea nevadensis* Oberthür, 1904

*Melitaea dejone* [sic!] *nevadensis* Oberthür, 1904: 14.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — W European.

ECOLOGY. — Subnemoral, lowland-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Pian della Casa, subalpine pastures 1650, VIII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI-VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VI-VII.2009; Valasco, Hygrophilous grassland 1750 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

*Melitaea cinxia* (Linnaeus, 1758)

*P[apilio] cinxia* Linnaeus, 1758: 480

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Asiatic-Euro-Mediterranean.

ECOLOGY. — Subnemoral, lowland-upper montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650, VII.2008; Valasco, Hygrophilous grassland 1750 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VI-VII.2009, CS.

*Melitaea deione* (Geyer, [1832])

*[Papilio] deione* Geyer, [1832]: 192.

FIRST RECORD FOR THE VALDIERI AREA. — MRSN 1976 (Andonno, 750 m).

CHOROTYPE. — SW Euro-Mediterranean.

ECOLOGY. — Subnemoral, lower-upper montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

*Melitaea diamina* (Lang, 1789)

*Papilio diamina* Lang, 1789: 44.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnemoral, lower montane, mesophilous, hygrophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI.2009; Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, Subalpine scree, 1900 m, VI.2009, CS.

*Melitaea didyma* (Esper, [1778])

*P[apilio] didyma* Esper, [1778]: 1 (1), pl. 41, fig. 3, text [1779], 365.

FIRST RECORD FOR THE VALDIERI AREA. — MRSN 1964 (Valdieri, 1000 m).

CHOROTYPE. — Centralasiatic-Euro-Mediterranean.

ECOLOGY. — Open herbaceous, lowland-lower montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII-VIII.2008, CS.

*Melitaea phoebe* (Goeze, 1779)

*Papilio phoebe* Goeze, 1779: 365.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Asiatic-European.



ECOLOGY. — Subnemoral, lowland-lower montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008, CS.

*Melitaea trivialis* ([Denis & Schiffermüller], 1775)

*P[apilio] trivialis* [Denis & Schiffermüller], 1775: 179.

FIRST RECORD FOR THE VALDIERI AREA. — Baldizzone (1964).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Subnemoral, lower montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

*Melitaea varia* Meyer-Dür, [1851]

*Melitaea parthenie* var. *varia* Meyer-Dür, [1851]: 133.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911), see also Dujardin (1969).

CHOROTYPE. — Alpine-Appenninic.

ECOLOGY. — Open herbaceous, subalpine-alpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

*Melitaea aurelia* Nickerl, 1850

*Melitaea aurelia* Nickerl, 1850: 12.

FIRST RECORD FOR THE VALDIERI AREA. — Baldizzone (1971a, b).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Open herbaceous, lower montane, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Euphydryas* Scudder, 1872

*Euphydryas cynthia*  
([Denis & Schiffermüller], 1775)

*P[apilio] cynthia* [Denis & Schiffermüller], 1775: 179.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — S European (European Alps).

ECOLOGY. — Open herbaceous, subalpine-alpine, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

Subfamily HELICONIINAE Swainson, 1827

Genus *Argynnis* Fabricius, 1807

*Argynnis adippe* ([Denis & Schiffermüller], 1775)

*P[apilio] adippe* [Denis & Schiffermüller], 1775: 177.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Open herbaceous, lowland-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008, CS.

*Argynnis aglaja* (Linnaeus, 1758)

*Papilio aglaja* Linnaeus, 1758: 481.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnemoral, lowland-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII-VIII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, Hygrophilous grassland 1750 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VIII.2009, CS.

*Argynnis niobe* (Linnaeus, 1758)

*Papilio niobe* Linnaeus, 1758: 481.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Open herbaceous, lower montane-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009; Valasco, Subalpine scree, 1900 m, VII-VIII.2009, CS.

*Argynnis paphia* (Linnaeus, 1758)

*Papilio paphia* Linnaeus, 1758: 481.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Palaearctic.

ECOLOGY. — Nemoral, lowland-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Pian della Casa, subalpine pastures



1650, VIII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII-VIII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII-VIII.2009; Valasco, Hygrophilous grassland 1750 m, VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VIII.2009, CS.

Genus *Issoria* Hübner, [1819]

*Issoria lathonia* (Linnaeus, 1758)

*Papilio lathonia* Linnaeus, 1758: 481.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-Euro-Mediterranean.

ECOLOGY. — Open herbaceous, lowland-upper montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Valasco, *Juniperus* heathland/grassland, 1790 m, VIII.2009, CS.

Genus *Brenthis* Hübner, [1819]

*Brenthis daphne* (Bergsträsser, 1780)

[*Papilio*] *daphne* Bergsträsser, 1780: 32.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnemoral, lower-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII-VIII.2009; Valasco, Hygrophilous grassland 1750 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII-VIII.2009, CS.

Genus *Boloria* Moore, [1900]

*Boloria euphrosyne* (Linnaeus, 1758)

*Papilio euphrosyne* Linnaeus, 1758: 481.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Sibiric-European.

ECOLOGY. — Subnemoral, lowland-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI-VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VI-VII.2009; Valasco, Hygrophilous grassland 1750 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VI-VII.2009, CS.

*Boloria pales* ([Denis & Schiffermüller], 1775)

*P[apilio] pales* ([Denis & Schiffermüller], 1775: 177.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — S European (orophilous).

ECOLOGY. — Open herbaceous, subalpine-alpine, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

*Boloria graeca* (Staudinger, 1871a)

*Argynnis pales v. graeca* Staudinger, 1871a: 61.

FIRST RECORD FOR THE VALDIERI AREA. — Baldizzone (1965).

CHOROTYPE. — S European (orophilous).

ECOLOGY. — Open herbaceous, upper montane-subalpine, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Valasco, *Juniperus* heathland/grassland, 1790 m (2009), CS.

*Boloria titania* (Esper, [1789])

*P[apilio] titania* Esper, [1789]: Suppl. Theil 1, 58.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Holarctic.

ECOLOGY. — Subnemoral, upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650 m, VII-VIII.2008; Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, Hygrophilous grassland 1750 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII-VIII.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

*Boloria dia* (Linnaeus, 1767)

*Papilio dia* Linnaeus, 1767: 785.

FIRST RECORD FOR THE VALDIERI AREA. — MRSN 1974 (Valdieri, 900 m).

CHOROTYPE. — Centralasiatic-European (eastern limit Yakutia).

ECOLOGY. — Subnemoral, lowland-upper montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Subfamily LIMENITIDINAE Behr, 1864

Genus *Limnitis* Fabricius, 1807

*Limnitis populi* (Linnaeus, 1758)

*Papilio populi* Linnaeus, 1758: 476.

FIRST RECORD FOR THE VALDIERI AREA. — Baldizzone (1966).

CHOROTYPE. — Siberic-European.

ECOLOGY. — Nemoral, upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

*Limenitis camilla* (Linnaeus, 1764)

*Papilio camilla* Linnaeus, 1764: 304.

FIRST RECORD FOR THE VALDIERI AREA. — Cassulo L. 2001 pers. coll. (Andonno, 900 m).

CHOROTYPE. — European; NE China and Amur to Japan (disjunct).

ECOLOGY. — Nemoral, lowland-lower montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

*Limenitis reducta* Staudinger, 1901

*Limenitis camilla* var. *reducta* Staudinger, 1901: 22.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Turanic-European.

ECOLOGY. — Nemoral, lowland-lower montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Subfamily APATURINAE Boisduval, 1840

Genus

*Apatura ilia* ([Denis & Schiffermüller], 1775)

*P[apilio] ilia* [Denis & Schiffermüller], 1775: 172.

FIRST RECORD FOR THE VALDIERI AREA. — Cassulo L. 2001 pers. coll. (Valdieri, 900 m).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Nemoral, lowland-lower montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Subfamily SATYRINAE Boisduval, [1833]

Genus *Satyrus* Latreille, 1810

*Satyrus ferula* (Fabricius, 1793)

*Papilio ferula* Fabricius, 1793: 225.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-European, Northwest Africa.

ECOLOGY. — Subnemoral, lower-upper montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII-VIII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII-VIII.2009; Valasco, Hygrophilous grassland 1750 m, VII-VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009, CS.

Genus *Minois* Hübner, [1819]

*Minois dryas* (Scopoli, 1763)

*Papilio dryas* Scopoli, 1763: 153.

NEW RECORD. — First record in this article.

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnemoral, lowland-upper montane, mesophilous/thermophilous, mesophilous/xerophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VIII.2008, CS.

Genus *Hipparchia* Fabricius, 1807

*Hipparchia fagi* (Scopoli, 1763)

*Papilio fagi* Scopoli, 1763: 152.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — CS European.

ECOLOGY. — Nemoral, lowland-lower montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008, CS.

*Hipparchia hermione* (Linnaeus, 1764)

*Papilio hermione* Linnaeus, 1764: 281.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — CS European.

ECOLOGY. — Subnemoral, lowland-upper montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008, CS.

*Hipparchia semele* (Linnaeus, 1758)

*Papilio semele* Linnaeus, 1758: 474.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — European.

ECOLOGY. — Subnemoral, lower-upper montane, thermophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

Genus *Kanetisa* Moore, [1893]

*Kanetisa circe* (Fabricius, 1775)

*P.[apilio] circe* Fabricius, 1775: 495.

FIRST RECORD FOR THE VALDIERI AREA. — Balletto E. 1976 pers. coll. (S. Anna di Valdieri, 1000 m).

CHOROTYPE. — Turanic-European.

ECOLOGY. — Subnemoral, lowland-lower montane, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009, CS.

Genus *Arethusana* de Lesse, 1951

*Arethusana arethusa*  
([Denis & Schiffermüller], 1775)

*P.[apilio] arethusa* [Denis & Schiffermüller], 1775: 169.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-Euro-Mediterranean.

ECOLOGY. — Subnemoral, lower montane, thermophilous, xerophilous.

NOTE

Elsewhere in the region, only reported from Vallon de Mollières (1500 m), France.

Genus *Erebia* Dalman, 1816

*Erebia aethiopellus*  
(Hoffmannsegg, 1806)

*Papilio aethiopellus* Hoffmannsegg, 1806: 180.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — SW Alpine.

ECOLOGY. — Subnemoral, subalpine, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found.

*Erebia aethiops* (Esper, 1777)

*P.[apilio] aethiops* Esper, 1777: 1 (1), pl. 25, fig. 3, text [1779], 312.

FIRST RECORD FOR THE VALDIERI AREA. — MRSN 1979 (Valdieri, 900 m).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Nemoral, lower montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

*Erebia alberganus*  
(de Prunner, 1798)

*Pap.[ilio] alberganus* de Prunner, 1798: 71.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — SE-European (orophilous).

ECOLOGY. — Subnemoral, upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII-VIII.2009; Valasco, *Rhododendron* heathland, 1690 m (VII.2009; Valasco, Hygrophilous grassland 1750 m, VII-VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII-VIII.2009; Valasco, Subalpine scree, 1900 m, VIII.2009, CS.

*Erebia dromus* (Fabricius, 1793)

*Papilio dromus* Fabricius, 1793: 224.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Alpine-Apenninic-Pyrenaic.

ECOLOGY. — Open herbaceous, upper montane-alpine, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650, VII-VIII.2008, CS.

*Erebia epiphron* (Knoch, 1783)

*Papilio epiphron* Knoch, 1783: 131.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — European (orophilous).

ECOLOGY. — Subnemoral, upper montane-alpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650, VII-VIII.2008; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

*Erebia euryale* (Esper, [1805])

*P.[apilio] euryale* Esper, [1805]: Suppl. Theil 2, 8.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — CS European (orophilous).

ECOLOGY. — Subnemoral, upper montane-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650, VII-VIII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VIII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII-VIII.2009; Valasco, Hygrophilous grassland 1750 m, VII-VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII-VIII.2009; Valasco, Subalpine scree, 1900 m, VII-VIII.2009, CS.

*Erebia gorge* (Hübner, [1804])

[*Papilio*] *gorge* Hübner, [1804]: *Papiliones*, pl. 99, figs 502-505.  
FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).  
CHOROTYPE. — S European (orophilous).  
ECOLOGY. — Screes, subalpine-alpine, mesophilous, xerophilous.  
EDIT PROJECT SAMPLING. — Not found.

*Erebia ligea* (Linnaeus, 1758)

*Papilio ligea* Linnaeus, 1758: 473.  
FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).  
CHOROTYPE. — Asiatic-European.  
ECOLOGY. — Nemoral, lower-upper montane, mesophilous, mesophilous.  
EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, Hygrophilous grassland 1750 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII-VIII.2009; Valasco, Subalpine scree, 1900 m, VIII.2009, CS.

*Erebia manto* ([Denis & Schiffermüller], 1775)

*P.[apilio] manto* [Denis & Schiffermüller], 1775: 169.  
FIRST RECORD FOR THE VALDIERI AREA. — Floriani (1965).  
CHOROTYPE. — CS European (orophilous).  
ECOLOGY. — Subnemoral, upper montane-subalpine, mesophilous, mesophilous.  
EDIT PROJECT SAMPLING. — Not found.

*Erebia melampus* (Fuessly, 1775)

*Papilio melampus* Fuessly, 1775: 31.  
FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).  
CHOROTYPE. — Alpine.  
ECOLOGY. — Subnemoral, upper montane-alpine, mesophilous, mesophilous.  
EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650 m, VII.2008; Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

*Erebia meolans* (de Prunner, 1798)

*Pap.[ilio] meolans* de Prunner, 1798: 71.  
FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).  
CHOROTYPE. — CSW European.

ECOLOGY. — Scree, upper montane-subalpine, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650 m, VII.2008; Valasco, *Rhododendron* heathland, 1690 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009, CS.

*Erebia montana* (de Prunner, 1798)

*Pap.[ilio] montanus* de Prunner, 1798: 71.  
FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).  
CHOROTYPE. — Alpine-Appenninic.  
ECOLOGY. — Screes, upper montane-subalpine, mesophilous, xerophilous.  
EDIT PROJECT SAMPLING. — Valasco, *Rhododendron* heathland, 1690 m, VIII.2009, CS.

*Erebia neoridas* (Boisduval, [1828])

*Satyrus neoridas* Boisduval, [1828]: 23.  
FIRST RECORD FOR THE VALDIERI AREA. — Curò (1874-80).  
CHOROTYPE. — Alpine-Appenninic-Pyrenaic.  
ECOLOGY. — Subnemoral, upper montane, thermophilous, mesophilous.  
EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VIII.2009, CS.

*Erebia pandrose* (Borkhausen, 1788)

[*Papilio*] *pandrose* Borkhausen, 1788: 95.  
FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).  
CHOROTYPE. — Centralasiatic-European (orophilous).  
ECOLOGY. — Open herbaceous, subalpine-alpine, microthermic, mesophilous.  
EDIT PROJECT SAMPLING. — Not found.

*Erebia pluto* (de Prunner, 1798)

*Papilio pluto* de Prunner, 1798: 20.  
FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).  
CHOROTYPE. — Alpine-Appenninic (orophilous).  
ECOLOGY. — Screes, alpine, mesophilous, xerophilous.  
EDIT PROJECT SAMPLING. — Not found.

*Erebia scipio* Boisduval, 1832*Erebia scipio* Boisduval, 1832: 152.

FIRST RECORD FOR THE VALDIERI AREA. — Turati &amp; Verity (1911).

CHOROTYPE. — SW Alpine (orophilous).

ECOLOGY. — Screes, upper montane-alpine, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Not found. Perhaps extinct in the area (see Rocci 1911).

## NOTE

Elsewhere in the region, only reported from Balma della Frema, at 2300 m, very close to the border between Italy and France.

*Erebia triaria* (de Prunner, 1798)*Pap.[ilio] triarius* de Prunner, 1798: 70.

FIRST RECORD FOR THE VALDIERI AREA. — Turati &amp; Verity (1911).

CHOROTYPE. — S European (orophilous).

ECOLOGY. — Open herbaceous, upper montane-subalpine, mesophilous, meso-xerophilous.

EDIT PROJECT SAMPLING. — Valasco, *Rhododendron* heathland, 1690 m, VI.2009, CS.Genus *Oeneis* Hübner, [1819]*Oeneis glacialis* (Moll, 1783)*Papilio glacialis* Moll, 1783: 102.

FIRST RECORD FOR THE VALDIERI AREA. — Turati &amp; Verity (1911).

CHOROTYPE. — Alpine.

ECOLOGY. — Screes, subalpine-alpine, mesophilous, xerophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI.2009; Valasco, Hygrophilous grassland 1750 m, VI.2009, CS.

Genus *Melanargia* Meigen, [1828]*Melanargia galathea* (Linnaeus, 1758)*Papilio galathea* Linnaeus, 1758: 474.

FIRST RECORD FOR THE VALDIERI AREA. — Turati &amp; Verity (1911).

CHOROTYPE. — European.

ECOLOGY. — Subnemoral, lowland-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII-VIII.2009, CS.Genus *Maniola* Schrank, 1801*Maniola jurtina* (Linnaeus, 1758)*Papilio jurtina* Linnaeus, 1758: 475.

FIRST RECORD FOR THE VALDIERI AREA. — Turati &amp; Verity (1911).

CHOROTYPE. — Turanic-Euro-Mediterranean.

ECOLOGY. — Subnemoral, lowland-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII.2009; Valasco, Subalpine scree, 1900 m, 2009, CS.Genus *Hyponephele* Muschamp, 1915*Hyponephele lycaon* (Kühn, 1774)*[Papilio] lycaon* Kühn, 1774: 21.

FIRST RECORD FOR THE VALDIERI AREA. — Turati &amp; Verity (1911).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Subnemoral, lower-upper montane, thermophilous, xerophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII-VIII.2009, CS.

Genus *Aphantopus* Wallengren, 1853*Aphantopus hyperantus* (Linnaeus, 1758)*Papilio hyperantus* Linnaeus, 1758: 471.

FIRST RECORD FOR THE VALDIERI AREA. — MRSN 1976 (Moscardini C. collection), legit Colzio (Valdieri, 750 m).

CHOROTYPE. — Asiatic-European.

ECOLOGY. — Subnemoral, lower-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII-VIII.2008, CS.Genus *Coenonympha* Hübner, [1819]*Coenonympha arcania* (Linnaeus, 1761)*Papilio arcania* Linnaeus, 1761: 273.

FIRST RECORD FOR THE VALDIERI AREA. — Turati &amp; Verity (1911).

CHOROTYPE. — Euro-Anatolian.

ECOLOGY. — Subnemoral, lowland-upper montane, mesophilous, mesophilous.



EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII-VIII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VII-VIII.2009; Valasco, *Rhododendron* heathland, 1690 m, VI-VIII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009; Valasco, Subalpine scree, 1900 m, VII.2009, CS.

*Coenonympha darwiniana*  
Staudinger, 1871

*Coenonympha arcania* var. *darwiniana* Staudinger, 1871: 32.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Alpine.

ECOLOGY. — Open herbaceous, upper montane-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Not found.

NOTE

*Coenonympha arcania macromma* Turati & Verity, 1911 (Type locality: Terme di Valdieri) has been treated as having species rank by Schmitt & Besold (2010). For the moment we prefer to maintain its more traditional treatment under *C. darwiniana*, pending the results of further analyses.

*Coenonympha glycerion*  
(Borkhausen, 1788)

[*Papilio*] *glycerion* Borkhausen, 1788: 90.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Sibiric-European.

ECOLOGY. — Open herbaceous, lower montane-subalpine, mesophilous, hygrophilous.

EDIT PROJECT SAMPLING. — Not found.

*Coenonympha pamphilus*  
(Linnaeus, 1758)

*Papilio pamphilus* Linnaeus, 1758: 472.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Open herbaceous, lowland-upper montane, eurytherm, eurychorous.

EDIT PROJECT SAMPLING. — Natural reserve *Juniperus phoenicea*, dry grassland 878 m, VII.2008, CS.

Genus *Pararge* Hübner, [1819]

*Pararge aegeria* (Linnaeus, 1758)

*Papilio aegeria* Linnaeus, 1758: 473.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Euro-Mediterranean.

ECOLOGY. — Nemoral, lowland-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Valasco, Hygrophilous grassland 1750 m, VI-VII.2009, CS.

Genus *Lasiommata* Westwood, 1841

*Lasiommata maera*  
(Linnaeus, 1758)

*Papilio maera* Linnaeus, 1758: 473.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Centralasiatic-European.

ECOLOGY. — Subnemoral, lowland-upper montane, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Pian della Casa, subalpine pastures 1650, VII-VIII.2008; Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI-VII.2009; Valasco, *Rhododendron* heathland, 1690 m, VII-VIII.2009; Valasco, Hygrophilous grassland 1750 m, VII.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VI-VIII.2009, CS.

*Lasiommata megera*  
(Linnaeus, 1767)

*Papilio megera* Linnaeus, 1767: 771.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Turanic-Euro-Mediterranean.

ECOLOGY. — Open rocky ground, lowland-upper montane, eurychorous, xerophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI.2009, CS.

*Lasiommata petropolitana*  
(Fabricius, 1787)

*Papilio maera* var. *petropolitana* Fabricius, 1787: 36.

FIRST RECORD FOR THE VALDIERI AREA. — Turati & Verity (1911).

CHOROTYPE. — Sibiric-European.

ECOLOGY. — Subnemoral, upper montane-subalpine, mesophilous, mesophilous.

EDIT PROJECT SAMPLING. — Fishing reserve Cappello di Napoleone, Beech-wood clearings, 1300 m, VI.2009; Valasco, *Juniperus* heathland/grassland, 1790 m, VII.2009, CS.

## DISCUSSION

The Valdieri area has long been known to include a variety of Mediterranean and Alpine elements, often occurring together side by side, in such an intricate pattern of co-habitations as is found virtually nowhere else in the Alps.

Van Swaay *et al.* (2006, 2010) have shown that butterflies are strongly declining all across Europe (31% of the European butterflies has declining populations). Habitat destruction is the main cause of extinction throughout the Italian territory and, as already pointed out for many countries (e.g., van Swaay *et al.* 2010), a correct conservation policy should begin by stopping urbanization and intensive agriculture, at least in the most sensitive areas, and revitalizing traditional agro-pastoral activities. The analysis of population extinction patterns within the Italian butterfly fauna, however, shows that such measures may be insufficient (Bonelli *et al.* 2011). One-third of these extinctions, in fact, were not clearly related to habitat destruction. Other threats, in particular global warming, will soon represent a matter of serious concern, as also shown by Settele *et al.* (2008).

A study by Bonelli and colleagues (unpublished data) has shown that considerable changes have occurred in the overall distribution of butterflies in a sector of the Valdieri area, over a 30 year time frame (1977-2010). Some species, present exclusively above the montane belt, such as *Coenonympha [darwiniana] macromma* (see also Schmidt & Besold 2010), *C. glycerion* (Borkhausen, 1788), *Colias phicomone* (Esper, [1780]), *Erebia manto* ([Denis & Schiffermüller], 1775), or *Pieris callidice* (Hübner, [1800]) have disappeared, while as many as 18 other species have spread from lower to higher altitudes.

The species newly recorded during our fieldwork for the Valdieri area might fall into the latter case. *Minois dryas* is rather widespread in North Italy. It is classified as subnemorale and mesophilous, usually being present from the lowland to the montane belt. Its previous absence from the faunal list of Valdieri could be due to a recent spreading of the species into the area. However, even if historical data represent an invaluable tool, only the use of standardised monitoring, repeated over time, allows the reliable identification of changes in species numbers and distribution.

In this context, the still very high biodiversity of the Valdieri area becomes even more important. Moreover, this area is home to viable populations of four globally threatened butterfly species, all listed in Annex IV of the Habitats Directive and in Appendix 2 of the Bern Convention: *Parnassius apollo* (Linnaeus, 1758) (also included in CITES App. 1), *Parnassius mnemosyne* (Linnaeus, 1758), *Papilio alexanor* Esper, [1800] and *Maculinea arion* (Linnaeus, 1758).

Populations of *P. apollo* and *P. mnemosyne*, in particular, benefit from a abundant breeding sites in this area and accordingly have very high population densities, while *P. alexanor* has in this area its most robustly established population within the Italian territory (Bonelli *et al.* this issue, Sala & Bollino 1991).

Several other interesting species, from a conservation point of view (van Swaay *et al.* 2010) are also firmly established

in this area, such as *Thymelicus acteon* (Rottemburg, 1775) (mainly Mediterranean), *Glaucopsyche alexis* (Poda, 1761) and *Boloria titania* (Esper, [1789]) (mainly montane species).

## Acknowledgements

The All Taxa Biodiversity Inventory + Monitoring Mercantour / Alpi Marittime was launched by the European Distributed Institute of Taxonomy (EDIT) project (2006-2011).

We thank M. De Biaggi, L. Giraud (Parco Alpi Marittime) and M.-F. Leccia (Par National du Mercantour), and E. Rivella (Regional Agency for Environmental Protection – ARPA Piemonte). We also thank referees Tommaso Racheli and Paolo Parenzan for their advice.

## REFERENCES

## A BIBLIOGRAPHY OF THE BUTTERFLIES, BURNETS AND FORESTERS OF THE VALDIERI AREA

- ALBERTI B. 1937. — Eine neue alpine *Procris*-Art *Procris alpina* nov. spec. *Entomologische Zeitschrift* 50: 435-439, 515-516.
- ARNSCHIED W. R. 2000. — Die Macrolepidopteren-Fauna Westliguriens (Riviera dei Fiori und Ligurische Alpen in Oberitalien). *Neue Entomologische Nachrichten* 47: 1-310.
- BALDIZZONE G. 1964. — Note di Lepidotterologia. Reperti di Lepidotteri nel Piemonte meridionale. *Bollettino della Società entomologica italiana* 94: 164-167.
- BALDIZZONE G. 1965. — Note di Lepidotterologia. Reperti di Lepidotteri nel Piemonte meridionale II. *Bollettino della Società entomologica italiana* 95 (3-4): 62-64.
- BALDIZZONE G. 1966. — Ritrovamento di *Limenitis populi* nelle Alpi Marittime. *Bollettino della Società entomologica italiana* 96: 144.
- BALDIZZONE G. 1971a. — Reperti di Ropaloceri nel Piemonte meridionale. III. *Bollettino dell'Associazione Romana di Entomologia* 26 (1-2): 19-26.
- BALDIZZONE G. 1971b. — La femmina dell'*Erebia manto* Schiff. ssp. valmaritima Floriani (Lepidoptera Satyridae). *Bollettino della Società entomologica italiana* 103 (1-2): 42-43.
- BALLETTO E. 1995. — Endemism, areas of endemism, biodiversity and butterfly conservation in the Euro-Mediterranean area. *Bollettino del Museo regionale di Scienze Naturali*, Torino 13: 445-491.
- BALLETTO E. 2005. — Fauna terrestre: I Lepidotteri, in BLASI C., BOITANI L., LA POSTA S., MANES F. & MARCHETTI M. (eds), *Stato della Biodiversità in Italia – Contributo alla strategia nazionale per la Biodiversità*. Ministero per l'Ambiente e Società Botanica Italiana, Roma: 256-261.
- BALLETTO E. & CASALE A. 1991. — Mediterranean Insect Conservation: The importance of Pleistocene Refugia, in COLLINS M. & THOMAS J. (eds), *The Conservation of Insects and their Habitats*. Academic Press, London: 121-142.
- BALLETTO E. & KUDRNA O. 1985. — Some aspects of the conservation of the butterflies, Lepidoptera: Papilionoidea, in Italy with recommendations for the future strategies. *Bollettino della Società entomologica italiana* 117 (1-3): 39-59.
- BALLETTO E. & KUDRNA O. 1986. — An Annotated Catalogue of the Burnets and Foresters (Lepidoptera: Zygaenidae) named by Roger Verity. *Journal of Research on the Lepidoptera* 24 (3): 226-249.
- BALLETTO E. & TOSO G. G. 1975. — Reperti di ropaloceri nelle Alpi Liguri. *Bollettino della Società entomologica italiana* 107 (9/10): 160-163.

- BALLETTO E. & TOSO G. G. 1978. — Nuovi reperti di ropaloceri nelle Alpi occidentali. *Bollettino della Società entomologica italiana* 110 (1/3): 35-38.
- BALLETTO E., BARBERIS G. & TOSO G. G. 1982. — Aspetti dell'ecologia dei lepidotteri ropaloceri nei consorzi erbacei delle Alpi italiane. *Quaderni sulla "Struttura delle Zoocenosi terrestri" CNR*, Roma, 2 (II 2), AQ/1/193: 11-95.
- BALLETTO E., BONELLI S., BORGHESIO L., CASALE A., BRANDMAYR P. & VIGNA-TAGLIANTI A. 2010. — Hotspots of biodiversity and conservation priorities: a methodological approach. *Italian Journal of Zoology* 77: 2-13.
- BALLETTO E., BONELLI S. & CASSULO L. 2007. — Insecta Lepidoptera Papilionoidea, in RUFFO S. & STOCH F. (eds), *Checklist and Distribution of the Italian Fauna. 10.000 Terrestrial and Inland Water Species, 2nd and revised edition*. Memorie del Museo Civico di Storia Naturale di Verona, 2° serie, Sezione di Scienze della Vita, 17: 257-261, with data on CD-ROM.
- BALLETTO E., BONELLI S., CASSULO L., MEREGALLI M. & TONTINI L. 2003. — Italy, in VAN SWAAY C. A. M. & WARREN M. S. (eds), *Prime Butterfly Areas in Europe: Priority Sites for Conservation*. Ministry of Agriculture, Nature Management and Fisheries, The Netherlands: 328-356.
- BALLETTO E., CASSULO L. & BONELLI S. 2014. — An annotated Checklist of the Italian Butterflies and Skippers (Papilionoidea, Hesperioidea). *Zootaxa*, 3853 (1): 1-114.
- BALLETTO E., CASSULO L. & TOSO G. G. 1985. — Contributo alla biogeografia degli Zigenidi delle Alpi Liguri. *Lavori della Società Italiana di Biogeografia* 9: 2-79.
- BALLETTO E., TOSO G. G., BARBERIS G. & ROSSARO B. 1977. — Aspetti dell'ecologia dei Lepidotteri ropaloceri nei consorzi erbacei alto appenninici. *Animalia, Catania* 4 (3): 277-343.
- BANG-HAAS O. 1926. — *Novitates macrolepidopterologicae*. 1. Band, Dresden-Blasewitz, 238 p.
- BERGSTRÄSSER J. A. B. 1779. — *Nomenclatur und Beschreibung der Insecten in der Grafschaft Hanau-Münzenberg*. Im Verlage der Verfassers 3: 1-48, *ibid.* [1780], 124 pls.
- BERGSTRÄSSER J. A. B. 1780. — *Nomenclatur und Beschreibung der Insekten der Grafschaft Hanau Münzenberg*. Im Verlage der Verfassers, Hanau 4: 1-47. *Ibid.* [1780], 124 pls.
- BOISDUVAL J. A. 1828. — *Europaerum lepidopterorum index methodicus*. Apud Méquignon-Marvis, Bruxelles. 1: 1-106.
- BOISDUVAL J. A. 1832. — *Icones historique des Lépidoptères nouveaux ou peu connus. Collection des papillons d'Europe*. Librairie encyclopédique du Roret, Paris. 1, p. 1-246, 47 pls.
- BONELLI S., CERRATO C., LOGLISCI N. & BALLETO E. 2011. — Population extinctions in the Italian diurnal Lepidoptera: an analysis of possible causes. *Journal of Insect Conservation* 15 (6): 879-890.
- BORKHAUSEN M. B. 1788. — *Naturgeschichte der europäischen Schmetterlinge nach systematischer Ordnung*. Barrentrapp und Wenner, Frankfurt. 1, p. I-XXXVI + 1-288, 1 pl.
- BRÜNNICH M. T. 1763. — *Catalogus af Danske Insekter*, in PONTOPPIDAN E. [H. H.], Den Danske Atlas. Kongelia Universitets, Kibenhavn: 660-700; 1: 1-6, I-XL, 2: 1-725, 30 pls, 1 map.
- BRYK F. 1935. — Lepidoptera Parnassiidae pars II (Subfam. Parnassiinae). *Das Tierreich*, 65 (1-1): 1-790.
- CAMERON-CURRY P., LEIGHEB G., RIBONI E. & CAMERON-CURRY V. 1983. — *Euchloe tagis* and *Artogeia ergane* in Piedmont north Italy. Pieridae. *Nota Lepidopterologica* 61: 35-37.
- CANTENER L. P. 1834. — *Histoire naturelle des lépidoptères rhopalocères ou papillons diurnes, des départements des Haut et Bas-Rhin, de la Moselle, de la Meurthe et des Vosges*. Roret et Levrault, Paris: 1-166, 37 pls.
- CASAGRANDE D. & MANZONE F. 1890. — Contributo alla Fauna entomologica italiana. Lepidotteri della provincia di Roma. *Lo Spallanzani* 28: 274-306.
- CUPEDO F. 1996. — Die morphologische Gliederung des *Erebia melampus*-Komplexes, nebst Beschreibung zweier neuer Unterarten: *Erebia melampus semisudetica* ssp. n. und *Erebia sudetica belledonnae* ssp. n. (Lepidoptera, Satyridae). *Nota lepidopterologica* 18 (2): 95-125.
- CUPEDO F. 1997. — Die geographische Variabilität und der taxonomische Status der *Erebia manto bubastis*-Gruppe, nebst Beschreibung einer neuen Unterart (Nymphalidae: Satyrinae). *Nota lepidopterologica* 20 (1/2): 3-22.
- CURÒ A. 1874. — Saggio di un Catalogo dei Lepidotteri d'Italia. *Bollettino della Società entomologica italiana* 6: 3-26, 106-123, 201-217, 315-316; (1878) 10: 5-8.
- CURÒ A. 1880. — Saggio di un Catalogo dei Lepidotteri d'Italia. *Bollettino della Società entomologica italiana* 21 (1889): 76-85.
- DANIEL F. 1968. — Die Makrolepidopteren-Fauna des Sausal-Gebirges in der Südsteiermark. *Mitteilungen der Abteilung für Zoologie und Botanik am Landesmuseum "Joanneum" in Graz* 30, 147 p.
- DAVID C. & SANETRA M. 1994. — Verbreitung, Biologie und Autökologie von *Papilio alexanor* Esper 1799 in den südwestlichen Alpenregion (Lepidoptera: Papilionidae). *Nachrichten des entomologischen Vereins Apollo, Neue Folge* 15: 1-24.
- DENIS M. & SCHIFFERMÜLLER I. 1775. — *Ankündigung eines systematischen Werkes von der Schmetterlingen der Wienergegend herausgegeben von einigen Lehrern am k. k. Theresianum*. Augustin Bernardi Buchhändler, Wien: 1-322.
- DINCĂ V., LUKHTANOV V. A., TALavera G. & VILA R. 2011. — Unexpected layers of cryptic diversity in wood white Leptidea butterflies. *Nature Communications* 2 (324): 1-8.
- DINCĂ V., WIKLUND C., V. A., KODANDARAMAIAH U., NORÉN K., DAPPORTO L., WAHLBERG N., VILA R. & FRIBERG M. 2013. — Reproductive isolation and patterns of genetic differentiation in a cryptic butterfly species complex. *Journal of Evolutionary Biology* <http://dx.doi.org/10.1111/jeb.12211>
- DUJARDIN F. 1964. — Descriptions de sous-espèces nouvelles de Nymphalidae des Alpes-Maritimes et des Hautes Alpes (Lepidoptera). *Riviera scientifique* 1964: 42-45.
- DUJARDIN F. 1965. — Papilionidae (Lep.) Espèces de France et sous-espèces des Alpes-Maritimes. *Entomops*, 4: 120-122
- DUJARDIN F. 1969. — Observations concernant les sous-espèces françaises de *Melitaea varia* Meyer-Dür. *Entomops* 13: 276.
- DUPONCHEL P. A. J. 1835. — *Crépusculaires, supplément au Tome troisième, in GODART M. J. B. & DUPONCHEL P. A. J. 1835 Histoire naturelle des Lépidoptères de France, supplément Tome deuxième*. Firmin Didot Frères, Paris: 1-192, 12 pls.
- EISNER C. 1956. — Parnassiana Nova IX – Kritische Revision der Gattung *Parnassius* (Fortsetzung 6). *Zoologische Mededelingen* 34 (13): 201-222.
- EISNER C. 1957. — Parnassiana Nova. XVII – Kritische Revision der Gattung *Parnassius* (Fortsetzung 12). *Zoologische Mededelingen* 35 (20): 283-298.
- EISNER C. 1974. — Parnassiana nova XLIX. Die Arten und Unterarten der Baroniidae, Teinopalpidae und Parnassiidae (Erster Teil) (Lepidoptera). *Zoologische verhandelingen* 135: 3-96.
- EISNER C. 1975. — Parnassiana nova L. Neue Unterarten der Parnassiidae. *Zoologische Mededelingen* 49 (8): 81-84.
- EISNER C. 1976. — Parnassiana nova XLIX. Die Arten und Unterarten der Parnassiidae (Lepidoptera) (Zweiter Teil). *Zoologische Mededelingen* 146: 99-266.
- EITSCHBERGER U. 1983. — Systematische Untersuchungen am *Pieris napi-bryoniae*-Komplex (s. l.) (Lepidoptera, Pieridae). *Herbipoliana* 1 (1): i-xx, 1-504; (2): 1-601.
- EITSCHBERGER U. & REISSINGER E. 1971. — Der Baumweißling in Mittelmeerraum. Zur Taxonomie und Systematik von *Aporia crataegi* (L.). *Entomologische Zeitschrift* 81: 25-50.
- ELWES H. J. & EDWARDS J. 1897. — A Revision of the Oriental Hesperidae. *Transactions of the Zoological Society of London* 14 (4): 101-324, pls XVIII-XXVII.
- EPSTEIN H. J. 1980. — The foodplant of *Erebia aethiopsella* (Hoffmannsegg, 1806) (Satyridae). *Nota lepidopterologica* 2 (4): 137-138.
- ESPER E. J. C. 1776-[1830]. — *Die Schmetterlinge in Abbildungen nach der Natur mit Beschreibungen*. Erlangen: W. Walthers.



- Theil I. 1776-1779: Die Tagschmetterlinge: 1-388, pls 1-50. Fortsetzung Tagschmetterlinge. [1780]-1886: 1-190, pls 51-93. Supplement. Theil 1: Abschnitt 1. 1789-[1804]: 1-120, pls 94-116. Supplement. Theil 2. 1805-[1830]: 1-48, pls 117-126. Theil II 1778-1780: Die Abendschmetterlinge: 1778-1780, pls. 1-[25]. Fortsetzung Abendschmetterlinge. 1782-1786: 197-234, pls 26-36. Supplement. Abschnitt 2. 1789-[1804]: 1-52, pls 37-47.
- FABRICIUS I. C. 1775. — *Systema Entomologiae sistens Insectorum Classes, Ordines, Genera, Species*. Officina Libraria Cortii, Flensburgi et Lipsiae: 495.
- FABRICIUS I. C. 1787. — *Mantissa Insectorum sistens species nuper detectas*, Tom. II, Glossata. Impensis Christ. Gottl. Propft, Hafniae: 1-982.
- FABRICIUS I. C. 1793. — *Entomologia systematica emendata et aucta*, Tom. III, Pars I. Classis IX Glossata. Impensis C. G. Croft, Fil. Et Soc., Hafniae: [i-iv]; 1-487.
- FLORIANI G. C. 1965. — *Erebia manto* ssp. *valmaritima* n. delle Alpi Marittime. *Bollettino della Società entomologica italiana* 95 (9/10): 149-152.
- FOURCROY A. F. 1785. — *Entomologia parisiensis, Sive Catalogus Insectorum quae in Agro Parisiensi reperiuntur*. Via et Aedibus Serpentineis, Parisii: I-VIII, 1-544.
- FRUHSTORFER H. 1910. — Neue paläarktische Rhopaloceren. *Societas entomologica* 25 (13): 50-52.
- FRUHSTORFER H. 1917. — Neue paläarktische Rhopaloceren. *Entomologische Zeitschrift* 30 (26): 99-100;
- FRUHSTORFER H. 1918. — Neue paläarktische Rhopaloceren. *Entomologische Zeitschrift* 31 (20): 77-78.
- FRUHSTORFER H. 1920. — Altes und Neues über Erebien. *Archiv für Naturgeschichte* 84 (1918) (A) (7): 83-108.
- FRUHSTORFER H. 1923. — Neue und seltene *Parnassius*-Rassen. *Entomologischer Anzeiger* 3 (9): 108-109, (11): 131-133.
- FRUHSTORFER H. 1924. — Neue und seltene *Parnassius*-Rassen. *Entomologischer Anzeiger* 4 (1): 6-7; (2): 17-21.
- FUESSLY J. C. (FUESSLINS J. C.). 1775. — *Verzeichnis dem ihn bekannten schweizerischen Insekten*. Heinrich Steiner und Compagnie, Zürich und Winterthur: I-XI, 1-62.
- GALLO E. 1973. — *Zygaena vesubiana* nelle Alpi Marittime. *Bollettino della Società entomologica italiana*, 52: 98.
- GALLO E. 1978. — Alcune interessanti catture di Lepidotteri in Italia (Ropalocera). *Bollettino della Società entomologica italiana* 110 (4-6): 84-86.
- GHILIANI V. 1852. — Materiali per servire alla compilazione della Fauna Entomologica Italiana, ovvero Elenco delle specie di Lepidotteri riconosciute esistenti negli Stati Sardi. *Memorie della Reale Accademia di Scienze di Torino* 14 (2): 131-247.
- GHILIANI V. 1853. — Aggiunte autografe a "Materiali per servire alla compilazione della Fauna Entomologica Italiana, ovvero Elenco delle specie di Lepidotteri riconosciute esistenti negli Stati Sardi". (Unpublished manuscript circulated by the author).
- GEYER C. [1827-1832]. — Continuation of Hübner's, "Sammlung europäischer Schmetterlinge". pls Pap. 182-207.
- GIANELLI G. 1890. — Osservazioni ed aggiunte al Catalogo dei Lepidotteri del Piemonte di Vittore Ghiliani, coll'indicazione dei principali bruchi che danneggiano i prodotti agricoli. *Atti della Reale Accademia d'Agricoltura di Torino* 33: 183-207.
- GIANTI M. & GALLO E. 2002. — Nuovi dati sulla presenza in Italia settentrionale di *Leptidea reali* (Lepidoptera Pieridae). *Bollettino della Società entomologica italiana* 134 (1): 67-72.
- GOEZE J. A. E. 1779. — *Entomologische Beyträge zu der Ritter Linnaeus zwölften ausgabe des Natursystems, dritten theiles erster band*. Weidmanns Erben und Reich, Leipzig, p. I-XL, 1-390.
- HARRIS H. G. 1935. — A holiday in Piedmont. *Entomologist's record and Journal of Variation* 47 (7-8): 84-86.
- HARRIS H. G. 1938. — Sestrières, Clavières and the Baths of Valdieri. *Entomologist's record and Journal of Variation* 50 (4): 37-40.
- HELLMANN F. & PARENZAN P. 2010. — *I Macrolepidotteri del Piemonte*. Museo Regionale di Scienze Naturali, Torino, 1058 p.
- HELLMANN F., BROCKMANN E. & KRISTAL M., 1999. — *I Macrolepidotteri della Valle d'Aosta*. Museo regionale Sci. nat., Saint Pierre, Aosta. Monografie n° II, 288 p.
- HOFFMANNSEGG J. C. G. VON 1804. — Alphabetisches Verzeichniss zu J. Hübner's Abbildungen der Papilionen. *Magazin für Insektenkunde herausgegeben von Karl Illiger* 3: 181-206.
- HOFFMANNSEGG J. C. G. VON 1806. — Erster Nachtrag zu des Gr. v. Hofmannsegg Alphabetischem Verzeichnisse von Hübner's Papilionen. Durch denselben. *Magazin für Insektenkunde herausgegeben von Karl Illiger* 5: 176-183.
- HOHENWARTH S. (VON) 1792. — *Insekten*, in Reiner J., *Botanische Reisen nach einigen oberkärntnerischen und benachbarten Alpen übernommen*, Carl Fried. Wallisesr, Klagenfurt, p. I-XI, 1-270 [+ 16: Buchregister].
- HÜBNER J. 1793. — *Sammlung auserlesener Vögel und Schmetterlinge*. Augsburg: 1-16, 100 pls.
- HÜBNER J. 1796-1838 — *Sammlung europäischer Schmetterlinge* [Text]. Augsburg, Vol. 1 Papiliones: 1-194, 789 pls.
- JUTZELER D. 1993. — Élevage de *Euchloe tagis* ssp. *bellezina* (Boisduval, 1828) du Piémont (Italie du Nord-Ouest). *Bulletin de la Société entomologique de Mulhouse* 1993: 45-48.
- KNOCH A. W. 1783. — *Beiträge zur Insektengeschichte*. Schwicterschen Verlage, Leipzig 3: 131, pl. 6, fig. 7.
- KUDRNA O. 1983. — An annotated catalogue of the butterflies (Lepidoptera: Papilionoidea) named by Roger Verity. *Journal of Research on the Lepidoptera* 21 (1): 1-105.
- KUDRNA O. & BALLETTTO O. 1984. — An annotated catalogue of the Skippers, Lepidoptera: Hesperidae) named by Roger Verity. *Journal of Research on the Lepidoptera* 23 (1): 35-49.
- KÜHN A. C. 1774. — Anecdoten zur Insekten-Geschichte. *Der Naturforscher, Halle* 3: 1-27, 2 pls.
- LANG H. G. 1789. — *Verzeichniss seiner Schmett, in den Gegend um Augsburg gesammelt*, (ed. 2), Eberhard Kletts fe. Wittwe und Franek, Augsburg: 1-227.
- LE CHARLES L. 1933. — *Zygaena bryzae* ssp. *vesubiana*. *Bulletin de la Société entomologique de France* 38 (16): 253.
- LEIGHB G., CAMERON-CURRY V., RIBONI E. & CAMERON-CURRY P. 1987. — Distribution of *Erebia scipio* Boisduval in Italy (Lepidoptera Satyridae). *Nota lepidopterologica* 9 (3/4): 213-215.
- LESSE H. DE 1959. — Caractères et répartition en France d'*Erebia aethiops* Hoffmsg. et *E. mnestra* Hb. *Alexanor* 1: 72-81.
- LINNAEUS C. 1758. — *Systema naturæ per regna tria naturæ, secundum classes, ordines, genera, species*. Editio decima reformata, Laurentii Salvii, Holmiae. vol. 1: 1-824.
- LINNAEUS C. 1761. — *Fauna Svecica sistens Animalia Sveci Regni: Mammalia, Aves, Amphibia, Pisces, Insecta, Vermes*. Editio altera, 1-578.
- LINNAEUS C. 1764. — *Museum S:ae R:ae M:tis Ludovicae Ulricaë Reginar Svecorum*. Laur. Salvii: [i-vi], 1-713 [+index].
- LINNAEUS C. 1767. — *Caroli Linnæi Systema naturæ per regna tria naturæ, secundum classes, ordines, genera, species*. Editio duodecima reformata. Laurentii Salvii, Holmiae, Tom.I, Pars II, 533-1327 [+37 unnumbered].
- MAYER J. 1851. — *Pont. Mannii* n. sp. *Entomologische Zeitung, Herausgegeben von dem entomologische Vereine zu Stettin* 12 (5): 151.
- MEIGEN J. W. 1829-1830. — *Systematische Beschreibung der europäischen Schmetterlinge mit Abbildungen auf Steintafeln*. J. A. Mayer, Aachen. Bd. 2: [i-iii], 1-69, xxxviii pls.
- MEYER-DÜR L. R. 1851. — Verzeichniss der Schmetterlinge der Schweiz. I. Abtheilung. Tagfalter. mit Berücksichtigung ihrer klimatischen Abweichungen nach horizonlaler und vertikaler Verbreilung bearbeitet. *Neue Denkschriften der Allgemeinen Schweizerischen Gesellschaft für die Gesammten Naturwissenschaften* 12: 1-239, 1 pl.
- MOLL C. E. R (VON) 1783. — In VON PAULA SCHRANK F. & MOLL C. E. E., *Naturhistorische Briefe über Oestreich, Salzburg, Passau und Berchtesgaden*. J. J. Maners feel. Erbin, Salzburg, Erster Band: [i-v], 1-332, [+ 3 Index].

- NAUMANN C. M., TARMANN G. M. & TREMEWAN W. G. 1999. — *The Western Palaearctic Zygaenidae (Lepidoptera)*. Apollo Books, Stenstrup: 304.
- NICKEL F. A. 1850. — *Synopsis der Lepidopteren-Fauna Böhmens*. Friedr. Ehrlic, Prag, I Abtheilung: 1-77.
- NISAKA Y. 2000. — The current situation of European Rhopalocera. Part 2. Lycaenids. *Yadoriga* 184: 10-40.
- OBERTHÜR C. 1904. — Melitaea Dejone-Berisali, Ruchl (pl. I, fig. 5, 6 et aberr., fig. 7); Melitaea Dejone-Nevadensis, Ch. Obthr, et Melitaea Parthenie-varia, Mey D. (pl. I, aberr., fig. 8). *Études de Lépidoptérologie Comparée*. Imprimerie Oberthür, Rennes, 1: 11-16.
- OBERTHÜR C. 1910. — Notes pour servir à établir la Faune française et algérienne des lépidoptères (cont.). Rhopalocera. *Études de Lépidoptérologie comparée*. Imprimerie Oberthür, Rennes, 4: 15-417, pls 37-50; 54-57.
- OCHSENHEIMER F. 1808. — *Die Schmetterlinge von Europa*. Erster Theil: Falter oder Tagschmetterlinge, Erste Abteilung. Gerhard Fleischer dem Jüngern, Leipzig: [i-iv], 1-322.
- OCHSENHEIMER F. 1816. — *Die Schmetterlinge von Europa*. Vierter Band, Gerhard Fleischer dem Jüngern, Leipzig: i-x, 1-223, [+1].
- ORTALI A. & BERTACCINI E. 1987. — *Le farfalle diurne d'Italia*. Museo Ornitologico e di Scienze Naturali di Ravenna, 159 p.
- PALLAS P. G. 1771. — *Reise durch verschiedene Provinzen des Russischen Reichs*, Estter Theil, Kayserlichen Academie der Wissenschaften, St. Petersburg: [i-viii], 1-504, 1 Map, 50 pls.
- PARENZAN P. & PORCELLI F. 2007. — I Macrolepidotteri italiani – Fauna lepidopterorum Italiae (Macrolepidoptera) (+ CD). *Phytophaga* 15: 5-391.
- PODA N. 1761. — *Insecta musei graecensis*, Apud Joannem Baptistam Dietrich, Graecii: [i-vi], 1-127, [+12: Index], pls [1, 2].
- POLLARD E. & YATES T. J. 1993. — *Monitoring butterflies for ecology and conservation*. Chapman and Hall, London, 274 p.
- PRUNNER DE L. 1798. — *Lepidoptera pedemontana illustrata*. Matheus Guaita, Augusta Taurinorum: I-LI + 1-124.
- RAMBUR M. P. 1839. — *Faune entomologique de l'Andalousie*, vol. 2, Lépidoptères, Bertrand: 213-336, pls. 8-18.
- REISSINGER E. 1971. — Die geographisch – subspezifische Gliederung von *Colias alfacariensis* Ribbe unter Berücksichtigung der Migrationsverhältnisse (Lepidoptera, Pieridae). *Atalanta* 3 (4) (1971): 145-176; (6) (1972): 349-372.
- REISSINGER E. 1974. — Die geographisch – subspezifische Gliederung von *Colias alfacariensis* Ribbe unter Berücksichtigung der Migrationsverhältnisse (Lepidoptera, Pieridae). *Atalanta* 5 (1) (1974): 1-33.
- REISSINGER E. 1989. — Checkliste Pieridae Duponchel, 1835 (Lepidoptera) der West-Palaearctis (Europa, Nordwestafrika, Kaukasus, Kleinasien). *Atalanta* 20: 149-185.
- REVERDIN J. L. 1917. — Note sur l'armure génitale mâle chez *Lycaena argus* L. et ses variétés, in OBERTHÜR C. (ed.), *Études de Lépidoptérologie comparée* 14 (1): 17-30.
- RIBBE C. 1905. — Einige neue Formen von Schmetterlingen aus Andalusien. *Societas entomologica* 20 (18): 137-138.
- ROCCA L. 1950. — Appunti critici su "Lepidoptera Pedemontana" di L. De Prunner. *Bollettino della Società entomologica italiana* 80 (9-10): 82-88.
- ROCCI U. 1911. — Contribuzione allo studio dei Lepidotteri del Piemonte. Note ed osservazioni. I. *Atti della Società Ligustica di Scienze Naturali e Geografiche*. Genova 22 (1): 153-221.
- ROCCI U. 1912. — Contribuzione allo studio dei Lepidotteri del Piemonte. Note ed osservazioni. II. *Atti della Società Ligustica di Scienze Naturali e Geografiche*. Genova 23 (3): 161-196.
- ROCCI U. 1914. — Contribuzione allo studio dei Lepidotteri del Piemonte. Note ed osservazioni. III. *Atti della Società Ligustica di Scienze Naturali e Geografiche*. Genova 24 (1913) (2): 131-216.
- ROCCI U. 1919. — Osservazioni sui Lepidotteri di Liguria. Note comparative (Papilionidae-Pieridae 1a parte). *Atti della Società Ligustica di Scienze Naturali e Geografiche*. Genova 30 (1): 3-34.
- ROTTEMBURG S. A. 1775. — Anmerkungen zu den hufnagelischen Tabellen der Schmetterlinge. Erste Abteilung. *Der Naturforscher, Halle* 6: 1-34.
- SALA G. & BOLLINO M. 1991. — *Papilio alexanor* Esper from Italian Maritime Alps: a new subspecies (Lepidoptera, Papilionidae). *Atalanta* 22 (2/4): 75-79.
- SCHVEEN P. (VON) 1777. — Beyträge zur Naturgeschichte der Insekten. *Naturforscher* 10: 88-101, figs 2-9.
- SCHMITT T. & BESOLD J. 2010. — Upslope movements and large scale expansions: the taxonomy and biogeography of the *Coenonympha arcania* – *C. darwiniana* – *C. gardetta* butterfly species complex. *Zoological Journal of the Linnean Society* 159: 890-904.
- SCOPOLI I. A. 1763. — *Entomologia Carniolica exhibens Insecta Carniolae indigena*, Ioannis Thomae Trattner, Vindobonae: [i-xxx], 1-420, [+2].
- SETTELE J., KUDRNA O., HARPKE A., KÜHN I., VAN SWAAY C., VEROVNIK R., WARREN M., WIEMERS M., HANSPACH J., HICKLER T., KÜHN E., VAN HALDER I., VELING K., Vliegenthart A., WYNHOFF I. & SCHWEIGER O. 2008. — *Climatic Risk Atlas of European Butterflies*. Pensoft, Sofia-Moscow, 712 p.
- SPEYER A. 1851. — Eine Excursion auf den Patscher Kofel bei Innsbruck. Herausgegeben von dem entomologische Vereine zu Stettin 12: 329-340.
- STAUDINGER O. 1871. — I. *Macrolepidoptera*. In O. STAUDINGER, M. WOCKE, *Catalogue der Lepidopteren der europaischen Faunengebietet*. O. Staudinger, Dresden: i-xxxviii, 1-426.
- STAUDINGER O. 1871a. — Systematische Uebersicht der im Vorhergehenden aufgeführten Lepidopteren Griechenland's. *Horae Societatis entomologicae Rossicae* (1870) 7: 1-304, pls 1-3.
- STAUDINGER O. 1901. — in O. STAUDINGER & H. REBEL, *Catalogue der Lepidopteren der Palaearctischen Faunengebietet*, Friedlander & Sohn, Berlin, I Theil, Famil. Papilionidae-Hepialidae: i-xxxii, 1: 411.
- STORACE L. 1956a. — Su alcune specie italiane di *Anthrocera* Scop. Seconda nota. *Bollettino della Società entomologica italiana* 86 (9-10): 137-142.
- STORACE L. 1956b. — Note di Lepidotterologia II. *Bollettino della Società entomologica italiana* 86 (78): 98-108.
- STORACE L. 1961. — Considerazioni sulla *Colias australis* Verity (Lepidoptera Diurna, Pieridae). *Bollettino della Società entomologica italiana* 91 (3-4): 34-43.
- SWAAY C. VAN, WARREN M. S. & LOÏS G. 2006. — Biotope use and trends of European butterflies. *Journal of Insect Conservation* 10: 189-209.
- SWAAY C. VAN, CUTTELOD A., COLLINS S., MAES D., LOPEZ MUNGUIRA M., ŠAŠIĆ M., SETTELE J., VEROVNIK R., VERSTRAEL T., WARREN M., WIEMERS M. & WYNHOFF I. 2010. — European Red List of Butterflies. Publications Office of the European Union, Luxembourg, 47 p.
- TURATI E. 1909. — Nuove forme di Lepidotteri e note critiche III. *Naturalista siciliano*, Palermo, 21 N. S. (1) (1-8): 1-133.
- TURATI E. 1910. — La *Zygaena transalpina* Esp. e le sue forme italiane. *Bollettino del Laboratorio di Zoologia generale e di Agraria della R. Scuola Superiore di Agricoltura di Portici* 4: 134-162.
- TURATI E. 1911. — Lepidotteri del Museo Zoologico della R. Università di Napoli. Descrizioni di forme nuove e note critiche. *Annuario del Museo Zoologico della R. Università di Napoli*, 3 (18): 1-31.
- TURATI E. 1914a. — Contribuzioni alla Fauna d'Italia e descrizione di specie e forme nuove di Lepidotteri. I Parte – Lepidotteri della Valcamonica. *Atti della Società Italiana di Scienze Naturali, Museo Civico di Storia Naturale di Milano* 53 (3/4): 468-595.
- TURATI E. 1914b. — Revisione di una specie di *Erebia*. *Erebia alecto* Hb. (nerine Frr.). *Atti della Società Italiana di Scienze Naturali, Museo Civico di Storia Naturale di Milano* 53: 49 p.
- TURATI E. 1919. — Nuove forme di Lepidotteri. Correzioni e note critiche. IV. *Naturalista Siciliano, Palermo* 23 (7-12): 203-368.
- TURATI E. 1923. — Spizzichi di Lepidotterologia. *Bollettino della Società entomologica italiana* 55 (8): 116-122.



- TURATI E. & VERITY R. 1911. — Faunula Valderiensis nell'Alta Valle del Gesso (Alpi Marittime). Materiali per una Faunula lepidoterologica della Valderia. Rhopalocera. *Bollettino della Società entomologica italiana* 42 (1910): 170-265.
- TURATI E. & VERITY R. 1912. — Faunula Valderiensis nell'Alta Valle del Gesso (Alpi Marittime). Heterocera. *Bollettino della Società entomologica italiana* 43 (1911): 168-233.
- VERITY R. 1905-11. — *Rhopalocera Palaearctica. Iconographie et description des papillons diurnes de la région paléarctique. Papilionidae et Pieridae*. Roger Verity, Firenze, 378 p.
- VERITY R. 1911. — Alcuni Lepidotteri inediti o non ancora figurati. *Bollettino della Società entomologica italiana* (1910) 42: 266-281.
- VERITY R. 1914. — Le "Hesperiae" del gruppo dell' "alveus" Hüb. *Bollettino della Società entomologica italiana* 45 (1-4) (1913): 155-162.
- VERITY R. 1916. — Faunula della Provincia di Macerata (Marche). *Bollettino della Società entomologica italiana* 47: 45-78.
- VERITY R. 1919. — Seasonal polymorphism and races of some European Grypocera and Rhopalocera & Additional Notes. *Entomologist's record and Journal of Variation* 31 (1919): 27-31, 43-48, 87-89, 121-129, 178-184, 193-201; 32 (1920): 3-8, 140-152.
- VERITY R. 1920. — On Emergence of the Grypocera and Rhopalocera in relation to Altitude and Latitude. *Entomologist's record and Journal of Variation* 32 (4): 65-71, (6): 107-110.
- VERITY R. 1922. — Seasonal polymorphism and races of some European Grypocera and Rhopalocera & Additional Notes. *Entomologist's record and Journal of Variation* 33 (1921): 170-176, 190-193, 210-214; 34 (1922): 12-15, 68-73, 89-93, 124-142.
- VERITY R. 1925. — New races and forms of Palaearctic Grypocera. *The Entomologist's Record and Journal of Variation* 37 (4): 54-57.
- VERITY R. 1928a. — Zygaenae, Grypocera and Rhopalocera of the Cottian Alps compared with other races. *Entomologist's record and Journal of Variation* 38 (1926): 101-106, 120-126, 170-176; 39 (1927): 122-126, 154-157, 172-175; 40 (1928): 142-144, 160-163.
- VERITY R. 1928b. — Distinction de quelques races de l'*Aricia medon* Hüfn. et de l'espèce différente *A. cramera* Ersch. (Lép. Lycaenidae). *Bulletin de la Société entomologique française* 33: 179-183.
- VERITY R. 1931. — On the geographical variations and the evolution of *Lycaeides argus* L. (Lycaenidae). *Deutschen Entomologischen Zeitschrift Iris* 45: 30-69.
- VERITY R. 1932. — The Geographical Variations of *Boloria euphrosyne*, L. *Entomologist's record and Journal of Variation* 44 (8): 110-115; (9): 119-121.
- VERITY R. 1938. — Supplement to the "Butterfly races and Zygaene of Macedonia". *Entomologist's record and Journal of Variation* 50 (1938), suppl.: [1]-[16].
- VERITY R. 1939. — Supplement to the "Butterfly races and Zygaene of Macedonia". *Entomologist's record and Journal of Variation* 51 (1939), suppl.: [17]-[20].
- VERITY R. 1940-53. — *Le Farfalle diurne d'Italia*. Volume 1-5. Marzocco, Firenze.
- VERITY R. 1946. — Rassegna delle specie italiane della tribù Adscitidi (= genere Procris F. olim) (Lepidopt. Anthrocerides = Zygaenides). *Redia* 31: 123-162.
- VERITY R. & QUERCI O. 1924. — Races and seasonal polymorphism of the Grypocera and of the Rhopalocera of peninsular Italy (Annotated list). *Entomologist's record and Journal of Variation* 1923-24: 1-46.
- WARREN B. C. S. 1926. — Monograph of the tribe Hesperiidi (European species) with revised classification of the subfamily Hesperiinae (Palaearctic species) based on the genital armature of the males. *Transactions of the entomological Society of London* 74: 1-170.
- WEHRLI E. 1924. — Nice-St. Martin Vesubie-Digne. Ein Beitrag zur Lepidopterenfauna der Alpes Maritimes und der Basses Alpes. *Deutschen Entomologischen Zeitschrift Iris* 38 (1): 50-57, (2/3): 59-98.
- WILLIAMS H. B. 1946. — The Irish form of *Leptidea sinapis* L. *The Entomologist* 79 (992): 1-3.
- WOLFSBERGER J. 1960. — Die Macrolepidopteren-Fauna des Gardaseegebietes als Ausdruck des dortigen Mediterranen Klimas. *Memorie del Museo Civico di Storia Naturale - Verona* 7: 127-146.
- ZELLER P. C. 1847. — Bemerkungen über die auf einer Reise nach Italien und Sicilien Beobachteten Schmetterlingarten. *Isis (von Oken)* 4: 284-307.

Submitted on 5 March 2014;  
accepted on 20 October 2014;  
published on 27 March 2015.