

ATLAS OF BIODIVERSITY, NO. 1

Atlas of the Orthoptera of Catalonia

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English text.

Figures and maps refer to those included in the catalan version.

PRESENTATION

Catalonia is a country that is strategically located from a biogeographical point of view, a stone's throw from Mid-European and Mediterranean environments, washed by the Mediterranean, and going from a high mountain alpine environment to sub-desert steppes. In contrast to other countries, with flora and fauna composed of very few species, our nature is characterised by its great diversity and we enjoy an environment composed of very varied forms of life, adapted to quite different conditions. Our society, through its universities, institutes, administrations, specialists and nature lovers, has made a great effort to identify these species. However, a great deal of this knowledge is found in journals or books with a limited readership or dispersed in a great number of publications. They mostly concentrate on specific areas of the territory and often, the species have yet to be discovered.

We need tools to facilitate the conservation and management of these species. Which are they? Where are they? How many individual members of the species are there? In which habitats? What are their needs? These are questions which are key to be able to offer the correct planning of the territory, of the natural areas and of human activities in general. This is why the Department of the Environment was interested in creating this new collection of books, the *Atlas of Biodiversity*. Along the classical lines of a distribution atlas, but with the added contribution of identifying the species in Catalonia, illustrating them, giving notes on their conservation needs and studying how the different species associate and the most notable settings in our country, this new line hopes to offer books that prove to be of use to the scientist, to the enthusiast, to the town and country planner and the manager of habitats, to the designer of great building works, to the administrations and to the general public. This work sets up a framework that will allow us to bring together the work carried out in Catalonia, and to redirect our efforts. It constitutes a collection, which will specify Catalan flora and fauna. At the moment, work has started on the groups that will next appear in this series.

The *Atlas of the Orthoptera of Catalonia* is the first volume. These animals are often forgotten, but they are of considerable ecological importance, with a significant number of new forms discovered in Catalonia. This first Atlas, dedicated to a group of non-vertebrates, is a double satisfaction. Firstly, because it is a reflection of a decided expansion of the areas of action in matters of the conservation of the fauna of these traditionally forgotten groups. Secondly, because it shows, once again, the extraordinary diversity of forms in our country. No fewer than 161 species of locusts, grasshoppers, crickets, katydids and mole crickets. Its contribution is quite evident, with highly detailed maps of where they can be found. I have no doubt that the appearance of this collection will represent a before and an after in the knowledge of plants and animals in this country.

Ramon Espadaler i Parcerisas
Minister of the Environment

INTRODUCTION

The Iberian Peninsula is characterised by having a very rich and diverse fauna of Orthoptera with about 300 known species, a third of which are endemic. It is an area of great biogeographical interest, because it is the meeting point between the orthopteran fauna of Europe and Africa. Catalonia is found in this meeting point between the fauna of Europe and those of African influence, separated by the barrier of the Pyrenees, which is the northern/southern distribution limit of several species of Orthoptera.

To date, studies of the Orthoptera of Catalonia had been very one-off. At the end of the 19th century, the only known catalogue appeared (MARTORELL I PEÑA 1879), the works of Cuní i Martorell and later those of Navás at the beginning of the 20th century. It should be taken into account that all these authors also studied other groups of insects. Later, the works of Morales-Agacino (1942 and 1944) brought together all the references in the review this orthopterist did of the material deposited at the Museum of Zoology of Barcelona (MZB), collected by the Museum staff and collaborators between 1915 and 1935. This information has been the only basis for the few references to the Orthoptera of Catalonia in later works, with a considerable gap in collections and studies of approximately 60 years. It should also be taken into account that in Catalonia there are, amongst others, 20 endemic species, some of which are only known thanks to the samples collected at the beginning of the century. Despite this, in 1982, the Catalogue of the Orthoptera of the Iberian Peninsula appeared, bringing together these citations with few new contributions.

Systematic studies on the Peninsula refer to all the material belonging to Catalonia deposited in several institutions by various authors (CLEMENTE ET AL. 1989 b, 1990 b and c; LLORENTE 1982; LLORENTE & PINEDO 1990; LLORENTE & PRESA 1981 and 1983; PINEDO 1984, 1985 a and b and PRESA & LLORENTE 1979, amongst others), although the publications on studies only dealing with Orthoptera in Catalonia appeared later (OLMO-VIDAL 1990, 1992, 1994, 1999, 2000 a, b, c, 2001, OLMO-VIDAL & LLIMONA 2000 and OLMO-VIDAL & HERNANDO 2000), highlighting the description of the two species that were new to science: *Ctenodecticus thymi* of El Montsec and *Petaloptila pyrenaea* of the central Pyrenees. All this information has been used as a reference to consider the species cited as being present in Catalonia until before this Atlas was drawn up.

Finally, we should take into account that world-wide, the order of Orthoptera is represented by about 17,000 species, mainly in the tropics, of which we can find 900 species in western Europe, most of which are present in the Iberian Peninsula and Italy, which have the richest fauna. If we compare the 161 species present in Catalonia to the number of species in other areas, we can see that this number is very high. For example, the number of species in France is 202, for a territory that is 17 times larger than Catalonia and in the Spanish peninsula, with a surface area similar to that of France, there are 313 species. By contrast, in Germany there are 84 species, in Finland, 38 species and in England and Ireland there are only 31 species. The fact that Catalonia has a proportionally high number of species of Orthoptera is a result of its geographical situation and the great diversity of habitats present there.

The Atlas of Orthoptera of Catalonia is the third collection of these characteristics to be published in Europe, after the Atlases of Orthoptera of Switzerland and of Great Britain. The aim of the publication is to catalogue the number of species of Orthoptera present in Catalonia and to determine their distribution, with the aim of carrying out an initial contribution to knowledge of this group of insects in Catalonia.

Knowledge of the distribution of the Orthoptera in a particular area is one of the first stages for getting to know other aspects, such as the ecological and biogeographical ones related to this group.

METHODOLOGY

In drawing up this Atlas, we have used the habitual procedures for this kind of work. We have defined an area of study that covers the political territory of Catalonia, with a total of 366 grid squares of 10 x 10 km. In addition to the sources of information used, we took data on the species, number of specimens, date, place and collector, which make up a computerised register or citation. In addition, we noted information on the habitat, the plant community, the altitude, the time of collection and the climate, when this information was available. The main aim of these registers is to determine the presence of a certain species in a UTM grid represented by a point.

A first source of information was the study of the material deposited in entomological collections, most of which is in the Orthoptera collection of the Museum of Zoology of Barcelona (MZB). Other public collections consulted were the Orthoptera collection of the National Museum of Natural Sciences in Madrid (MNCN) and the collection of Arthropoda of the Department of Animal Biology of the University of Barcelona (UB).

Most of the material on Orthoptera in the collections in Catalonia dates back to the beginning of the 20th century, in contrast to the private collections later consulted in which the material has been collected mainly over the last 20 years. The list of private collections consulted is as follows:

- Joan Barat, Gavà.
- Miguel Carles-Tolrà, Barcelona.
- Arcadi Cervelló, Barcelona.
- Jordi Dantart, Barcelona.
- Carles Garcia de Castro, Sant Celoni.
- Àngel Lagar, Barcelona.
- Josep Martí, Barcelona.
- Josep Muñoz, Girona.
- Rafael Pujol, Barcelona.
- Albert Xaus, Sant Joan Despí.

Although all these collections represent an inestimable contribution to the making of this Atlas, we should highlight the entomological collection of Joan Barat with 682 entries. In this collection, there are several new citations of the group of Ensifera and two species endemic to Catalonia, about which there was only the material described at the beginning of the 20th century, such as *Steropleurus panteli* and *Ephippigerida asella*, recently rediscovered by Joan Barat. These two species were mentioned in the red book as possibly extinct or species whose systematic situation is unclear (GANGWERE ET AL. 1985). Another of the important collections was the one of the entomologist Josep Muñoz, where we found 321 registers of Caelifera and Ensifera that have also been included in the database of the Atlas.

In addition, the author's collection and the field samples represent the main basis of information of this Atlas. The field samples include a total of 268 grid squares sampled with a total of 6,552 registers, which represents 73% of all the grid squares considered, designed according to the information previously available. A minimum of one sample per grid square has been taken, choosing a representative plot of 30 x 30 m. The sample consisted of scouring the plot for 30 minutes by means of direct capture, using a net with a 20 x 15 cm opening and a 40 cm handle, in the area to be studied, to determine the different species present. The field notes were taken on collection cards and were later incorporated into the database. Predominant plant species in each plot were also

noted to be able to compare the structure of the populations of Orthoptera with the type of vegetation.

It should be taken into consideration that in the information obtained there are some grid squares with more samples than others. To be able to obtain information that is more comparable between each species and each grid square, the methodology of samples with the same capture effort was used, the aim of which is to obtain the minimum number of oversampled grid squares possible. Thus the real distribution of the species is more adjusted to the reality and is not so altered by the previous information, in this way the information on the distribution of a species can be compared to that of another, as well as the specific richness of the different grid squares. Therefore, we should take into account the distribution of the information in the different grid squares when drawing conclusions. It is important to mention how little information there is from the Central Depression and the central high plateaux and basins, probably due to the general tendency of entomologists to visit mountainous areas (figure 1).

The samples have been completed with studies on the fauna and ecology of some protected areas (The Metropolitan Park of Collserola, The Natural Park of El Garraf and the Natural Park of Montnegre and El Corredor) and ecological studies in the Alt Empordà, Segrià, Noguera, Segarra and Pallars Sobirà, in which the same method was used but with a longer and more intensive follow-up on the plots. Of these ecological studies, some research projects on the diet of vertebrates in which Orthoptera were part of the diet of some insect eaters are worth mentioning: lesser kestrel (*Falco naumanni*), red-legged partridge (*Alectoris rufa*) and capercaillie (*Tetrao urogallus*). The results of these projects have helped to complement the distribution of some species of Orthoptera and thus define the potential feeding areas of these birds. The grid squares that belong to the study areas of these projects have been incorporated in the database of the Atlas.

A third source of information has been the bibliography, which in this case has been very scant, with few works, all of a general nature (CLEMENTE ET AL. 1989 b, 1990 b and c; LLORENTE 1982; LLORENTE & PINEDO 1990; LLORENTE & PRESA 1981 and 1983; PINEDO 1984, 1985 a and b and PRESA & LLORENTE 1979), in which almost all the material deposited in the MNCN and the MZB, has been reviewed by the author of this Atlas.

We also included the species that could be identified from the photographic archives of Amador Viñoles and Eduardo Mateos.

Finally, with all this information, we built the database, which includes all the registers obtained from public and private collections, the photographic archives and, to a far lesser degree, the bibliography.

All this information can be seen in the distribution maps of the different species.

PRESENTATION OF THE RESULTS BY SPECIES

The format of the presentation has been made using a page per species to make it easier to view the information. In addition to the photograph of the species in question, we include a distribution map and a text divided into the sections:

1. STATUS

This shows the situation of the species both at a systematic level, and from the point of view of the aspects of conservation. We have considered the citations before 1970 compared to the later ones, to establish whether a species is in regression or not. A species is considered to be in regression if the citations prior to 1970 are greater than 40% of the total of the grid squares where the species is found. We have also included when a species is in abundance, considering the samples taken by the author as a base for establishing the different categories. We have taken into account the highest value of the specimen found of a species from all the grid squares sampled. In the case of species that have never been found in the samples, we considered the number of samples present in collections we consulted.

5 categories have been established:

Very "rare" species: 1 specimen per sample

"Rare" species: 2 to 5 specimens per sample

Not very abundant species: 6 to 10 specimens per sample.

Abundant species: 11 to 15 specimens per sample.

Very abundant species: more than 16 specimens per sample.

There is also mention of the most frequent synonymies.

2. DESCRIPTION

No description has been given of the genitalia, or the song of the species, aspects that are very important when distinguishing them, but which require a significant amount of time. All the descriptions refer to adult specimens unless stated to the contrary. With regard to the nomenclature, this is given in figures 2, 3 and 4.

3. ECOLOGY To be able to include more information on the habitats in which the different species are found, we have taken a series of plant communities from the Flora Manual dels Països Catalans (BOLÓS et al., 1990), establishing suitable categories for the communities of Orthoptera. In other words, not all the categories that have been considered coincide with the botanical categories present in Catalonia. Of the 12 main groups considered, we have specified the different subgroups in the case of woodland, thicket, and meadows that are probably the most diverse groups.

The communities considered are the following:

2. Woodland area.

1.1. Riverside woodland area. Woodland community near rivers and lakes.

Alder and willow groves.

1.2. Dry pine forest.

5.2.1. Mediterranean pine forest. This may consist of Aleppo pine (*Pinus halepensis*), Mediterranean stone pine (*Pinus pinea*) and Maritime pine (*Pinus pinaster*).

5.2.2. Sub Mediterranean Pine Forest. This may consist of Scots pine (*Pinus sylvestris*) and Austrian pine (*Pinus nigra*).

5.3. Pine forest of black mountain pine. Siliceous rockrose and heath at the Sub Alpine level.

5.4. Deciduous woodland Oak groves, beech woods.

5.5. Evergreen sclerophyllous woodland. Holm-oak grove.

6. Scrub (plant communities dominated by bushes).

2.1. Maquis. Sclerophyllous bushy community of between 3 and 4 m, dense and shady. In Catalonia, we find the coastal maquis (*Quercus-Lentiscetum*), dominated by mastic tree (*Pistacia lentiscus*), kermes oak (*Quercus coccifera*) and European fan palm (*Chamaerops humilis*).

2.2. Kermes oak (*Quercetum cocciferae*). Bushy community dominated by kermes oak (*Quercus coccifera*). Generally on a calcareous substratum. Approximately 1 m high.

2.2. Scrub.

2.2.1. Calcicolous rosemary scrub. Thinned out and not very tall (0.5 to 1 m). Mainly rosemary (*Rosmarinus officinalis*) and thyme (*Thymus vulgaris*).

2.2.2. Siliceous rockrose scrub and heath. Mainly rockrose (*Cistus*). Taller and thicker than calcicolous scrub.

2.2.3. Thyme thickets. Clear, mainly thyme (*Thymus vulgaris*).

a. Gypsum thyme thickets. In gypsum areas dominated by gypsophila (*Gypsophila hispanica*).

b. thyme thicket

2.2.6. Dry thorny scrub. Peak areas of Mediterranean high mountains.

2. 3. Heath We will consider the heaths of broom (*Sarothamnus scoparius*) and bracken fern (*Pteridium aquilinum*) of the high mountain level, of up to 2 m in height, frequently in the Pyrenees and the mountains in the transversal system as far as Montseny.

2. 4. Brambles. Very dense, common on the edges of woodland areas, dominated, amongst others, by brambles (*Rubus ulmifolius*), blackthorns (*Prunus spinosa*) and hawthorn (*Crataegus monogyna*).

2. 5. Box scrub. Dominated by box (*Buxus sempervirens*). Representing a degraded state of oak groves.

2. 6. Juniper thicket Dominated by juniper (*Juniperus communis ssp. nana*) and found in the Pyrenees between 1900 and 2400 m and on the highest parts of Montseny (1700 m).

2.7. Jonquil meadows. Low (20-40 cm) calcicolous Graminae scrubland, dominated by aphyllanthes (*Aphyllanthes monspeliensis*).

2.8. Grassy margins of damp woodland. Large herbaceous plants at the edges of damp woods in middle rainfall mountain.

2.9. Herbaceous saltwort (*Suaedo-Salicornietum europaeae*).

7. Meadow and grassland.

3.13. Mediterranean dry or semi-damp meadow.

3.13.1. Fields of fallow-land false brome. Mediterranean meadows of *Brachypodium phoenicoides*.

3.13.2. Savannah-type meadow. Dominated by (*Hyparrhenia hirta*).

3.13.3. Dry field of false brome. Dominated by *Brachypodium retusum*.

3.13.4. Small meadow. Dominated by thin soil annuals.

3.13.5. Continental wilderness. Belonging to the plains of the River Ebre, of a rockrose nature. Scant herbaceous groups dominated by gramineae.

3.14. Mountain meadows.

3.14.1. Damp and semi-damp pasture. Typical mountain meadow, full of flowers in spring and green throughout the summer.

3.14.2. Swath meadow. With tall broad-leaved grass in deep soil and with plenty of water.

3.15. Alpine and subalpine meadow. From 1600 to 2300m and from 2300 to 3000m, respectively.

3.16. Damp meadow on the Empordà plain

3.17. Riverside grassland. Present on muddy riverbanks. Dominated by Lady's thumb (*Polygonum persicaria*) and knotgrass (*Paspalum distichum*). They are Mediterranean communities.

3.18. High marsh grassland. Herbaceous plants that live in soil with a high moisture content. Marsh Mallow (*Althaea officinalis*) and Yellow Iris (*Iris pseudacorus*) are common.

4. Coastal dune. Plant life on coastal sandy areas.

5. Reedbed. (*Phragmites australis*). Mainly dominated by reeds (*Phragmites australis*) and bulrushes (*Typha sp.*).

20. Saltwort beds. Herbaceous and shrubs.

21. Rushes (halophyte and non halophyte).

22. Stony rivers.

23. Cultivated.

24. Fallow and cereal field margin. Also includes abandoned cultivated fields such as fields of almond trees or abandoned vines.

25. Urban garden.

26. **Cave.** Cave-like environments.

After the communities, the ranges of altitudes are specified when the sighting is included. Unless specified to the contrary, the sighting corresponds to the samples carried out by the author of the Atlas. Finally, this part contains information on the period during which the adults appear in Catalonia.

4. **DISTRIBUTION**

To interpret the distributions of Orthoptera in Catalonia, we have established territories also based on the botanical criteria established in the Flora Manual dels Països Catalans (BOLÒS et al., 1990), represented by 7 areas (figure 5), although the category of coastal area is not represented in this figure as it is a very narrow coastal strip. These criteria are determined according to the physical geography (topographic relief, climate, soil, vegetation...) and we believe that they cover the main distributions of Orthoptera in Catalonia.

15. **Pyrenees.** The Pyrenees themselves, or axial area, mainly siliceous, with some elevations that surpass 3000 m, Pre-Pyrenees (peripheral Pyrenees), mainly calcareous. From east to west, transversally, we have the eastern Pyrenees and the Central Pyrenees, roughly separated by the River Segre.
16. **Empordà plains.** Low coastal land. Empordà plains, Mediterranean maritime climate, windy, relatively cold in winter and with dry summers. Also known as ruscian territory.
17. **Transversal mountain system.** *Olositan* (pre-Roman inhabitants of the Garrotxa area) territory, low and medium mountains that join the Pyrenees with the northern *Catalanidic* mountains.
18. **Central high plateaux, and basins** *Auson-segàrric* territory, of the Plana de Vic and the Conca de Barberà. Mediterranean environment with continental tendency. Mainly calcareous soils. Divided into an eastern or *ausonic* sector and a western or Segarra sector.
19. **Central depression.** *Sicoric* territory, western plain that is the eastern tip of the depression of the Ebre. With continental Mediterranean conditions and very dry. The soil is always calcareous and sometimes saline or gypseous.

20. **Coastal mountain system.** *Catalanidic*, extending parallel to the Mediterranean coast, from the Ter to the Ports de Tortosa-Beceit. Maritime climate, which changes from warm and damp conditions to hot environments.

21. **Coastal area.** Mediterranean coast.

The distribution at a world level appears later in a synthesised form.

5. BIBLIOGRAPHY

In this section, we have taken into account the bibliographical references, which mention the species in question, of which we have record.

RESULTS

The first references to Orthoptera species in Catalonia, appeared in the catalogue of Martorell i Peña (1887) with 57 species. Later, in the catalogue of Orthoptera of the Iberian Peninsula (HERRERA 1982), this number was increased to 105 species and the list increased up to 135 in different works prior to this Atlas. To consider the number of species present, we have followed a criteria of not taking into account the species mentioned by Herrera as present in the Pyrenees, without further specifications, as we cannot be sure of their presence in Catalonia. On the other hand, some citations that are mentioned in these works, have not been confirmed, such as *Oedipoda miniata*, which is cited in Catalonia. We consider that this species, which belongs to the Balearic Islands (OLMO-VIDAL 1993 and GANGWERE & LLORENTE 1992), was probably confused with the form of the red wings of *Oedipoda charpentieri*. In this Atlas there are a total of 161 species of Orthoptera present in Catalonia and 27 new species are mentioned for the territory. Of these new species, we were surprised by the presence of species of wide distribution such as *Gryllus campestris*, which had not been specifically cited in Catalonia. The distribution of the number of species per grid square shows us the areas with the most significant richness in species (figure 6), although we should bear in mind the amount of information obtained in each grid square. It can be seen that, overall, the areas with a greater richness of species are the central coastal areas, the Transversal mountain system and the Central Pre-Pyrenees. Although some of these areas coincide with grid squares that have more information, they also coincide with places that are not very high, with a Mediterranean climate and with well-preserved habitats.

BIOGEOGRAPHICAL ANALYSIS AND COMMUNITIES OF ORTHOPTERA.

In order to interpret the relationships between the different species and their distributions, we have analysed by means of Jaccard's Index. We later drew up dendrograms, using the UPGMA method of association, with which we were able to establish different groups with respect to the distributions of species of Orthoptera. In this analysis we did not include species that were only present in one grid square.

With regard to the Ensifera (figure 7), we formed 4 characteristic groups, taking the distance of 15% as a limit of aggregation. The first group (4) is made up of the species that belong to the Ports de Tortosa-Beceit, consisting of 3 species: *Ehippigerida areolaria*, *Ehippigerida zapateri* and *Pycnogaster sanchezgomezi*. Another species that could be found because of its distribution is *Steropleurus ortegai*, but it has been excluded from the analysis as, for the moment, it only appears in one grid square. The following groups are made up of species that are mainly distributed in the Pyrenees and Transversal mountain system (3), from which it is important to mention species that are related through their wide distribution, such as: *Ehippiger ehippiger* and *Platycleis albopunctata*. In this group we can find *Antaxius hispanicus*, with new citations that have increased its initial distribution, which was little known and restricted to the Pyrenees. It is also important to mention the relationship between species that are exclusive to the Pyrenees, such as: *Decticus verrucivorus*, *Metrioptera roeseli* and *Tettigonia cantans*. Another group are the species of the inner areas (2), where we can find some species endemic to Catalonia with restricted distribution, such as: *Ctenodecticus masferreri*, *Ctenodecticus thymi*, *Dolichopoda linderi*, *Platystolus obvius*, *Ehippigerida asella*, *Petaloptila pyrenaea* and *Steropleurus panteli*. Species of the Mediterranean area (1), in which a sub group made up of 5 species that belong to the western Mediterranean should be mentioned: *Cyrtaspis scutata*, *Sepian sepium*, *Uromenus rugosicollis*, *Yersinella raymondi* and *Metaplastes pulchripennis*, which are mainly distributed in the northern part of the Coastal mountain system and the Transversal mountain system. There are two species with few locations and disperse distribution: *Platycleis falx* and *Saga pedo*.

As far as Caelifera are concerned (figure 8), also taking as a limit the 15% Euclidean distance, there are 5 groups. The first group (1) made up of just 5 species that only live in the Pyrenees. *Euthystira brachyptera*, *Mecosthetus grossus*, *Gomphoceridius brevipennis* and *Miramella alpina*. A second, larger group (2), is made up of species

present in the Pyrenees and Transversal mountain system, where we find *Stauroderus scalaris* and *Stenobothrus lineatus* with a strong relation in their distributions. Next is the group with species of a mainly Mediterranean area (3), with species with a wide distribution and species with a more restricted distribution. In this group we should mention two species that are closely associated, which are *Brachycrotaphus tryxalicerus* and *Acrotylus patruelis*, which are distributed along the coastal area in areas occupied by savannah-type meadows of *Hyparrhenia hirta*, *Calliptamus barbarus* and *Oedipoda caerulescens* are also closely related, being the two most widely distributed species of Caelifera in Catalonia. Another group is made up of species of a more southern Mediterranean area (4), with the exception of some species (*Oedipoda germanica* and *Chorthippus vagans*). In this group we should mention *Heteracris littoralis* and *Eyprepocnemis plorans*, as two very closely associated species only present on the coast. Also *Calliptamus wattenwylianus* and *Oedaleus decorus* have very similar disconnected distributions. It is also important to mention the distributions of two endemic Iberian species: *Ocnerodes brunneri* and *Omocestus burri*, which are distributed in areas of rosemary scrub in the southern part of Catalonia, as had been noted in previous studies (OLMO-VIDAL 2000 a).

Finally, we find group (5), made up of just two species: *Kurtharzia nugatoria* and *Stenobothrus grammicus*, with few findings.

Although the distribution of the species is influenced by biogeographical factors, climatic factors also condition these distributions. It is important to mention the distribution of the cave-dwelling species that are less affected by the climate and more by biogeographical aspects.

CLIMATIC ASPECTS AND VEGETATION

Overall, it seems that rainfall is the factor that most determines the distribution of the species of Orthoptera in Catalonia. To simplify the results, we have only differentiated rainfall over 1000 mm, which defines two separate areas of the Pyrenees and the Transversal mountain system, and that under 500 mm, which defines a single area in the Central Depression and western part of the Central basins (figure 9). Amongst the group of species that can be found above 1000 mm are:

Metrioptera saussuriana, *Pholidoptera griseoptera*, *Polysarcus denticauda*, *Pteronemobius lineolatus*, *Tettigonia cantans*, *Chorthippus apricarius*, *Stetophyma grossus*, *Omocestus viridulus* and *Stenobothrus stigmaticus*.

In this group, we find species that are linked to the rainfall, however, their distribution is also influenced by other factors, such as altitude and biogeographical aspects. For example, species that are only found in the Val d'Aran where there is high rainfall, but the reasons for their distribution could also be biogeographical. This is the case of *Metrioptera buyssoni*, *Phaneroptera falcata* and *Euchorthippus declivus*.

Other species such as *Chorthippus parallelus*, which is found in the range of rainfall higher than 1000 mm, are found outside this range, in l'Empordà, in inland flooded meadows where the rainfall is not so high, but probably the characteristics of this type of habitat adjust to the demands of this species.

In the group found in areas of rainfall of less than 500 mm, we can find *Chorthippus apicalis* as the species most restricted to this amount of rainfall.

One of the most interesting patterns has been the penetration of Mediterranean species through the Vall de la Noguera Pallaresa to the Pyrenees, such as *Oedaleus decorus*, *Steropleurus perezii*, *Tylopsis liliifolia* and *Omocestus raymondi*, probably as a result of the climatic aspects linked to the orography of the land.

Some other species have practically no requirements and are distributed throughout Catalonia, such as *Calliptamus barbarus* and *Oedipoda caerulescens*. We can also find species that live in areas with less than 500 mm rainfall in disconnected distributions on the Empordà plains on the one hand, and the Central Depression and Basins on the other. These species are *Platycleis affinis*, *Platycleis intermedia*, *Calliptamus wattenwylianus*, probably also influenced by the temperature (figure 10).

In addition to the climatic aspects, we need to consider the altitude (figure 11), noted for each species, and the vegetation. Obviously, all these aspects reflect the relationship between all these factors.

From the point of view of vegetation, we should mention *Brachycrotaphus tryxalicerus*, a species that only lives in savannah-type meadows of *Hyparrhenia hirta*, these meadows are only found in areas with high temperatures and with a high degree of humidity, in areas near the coast. Therefore, in this case, we will find a species that is linked to the vegetation but also indirectly linked to a specific type of climate.

Another case would be the one of *Heteracris littoralis*, a species that only lives in coastal dunes. This type of habitat is offered by characteristic plant communities, but is also linked to a certain climate.

THE LIST OF SPECIES FOUND IS AS FOLLOWS:

Order ORTHOPTERA

Suborder ENSIFERA

Family Tettigoniidae

Subfamily Phaneropterinae

1. *Phareroptera falcata*
2. *Phaneroptera nana*
3. *Tylopsis liliifolia*
4. *Isophya pyrenea*
5. *Barbitistes serricauda*
6. *Barbitistes fischeri*
7. *Metaplastes pulchripennis*
8. *Leptophyes punctatissima*
9. *Odontura aspericauda*
10. *Polysarcus denticauda*
11. *Polysarcus scutatus*

Subfamily Meconeminae

12. *Meconema thalassinum*
13. *Cyrtaspis scutata*

Subfamily Conocephalinae

14. *Conocephalus conocephalus*
15. *Conocephalus discolor*

Subfamily Copiphorinae

16. *Ruspolia nitidula*

Subfamily Tettigoniinae

17. *Tettigonia viridissima*
18. *Tettigonia singer*

Subfamily Decticinae

19. *Decticus verrucivorus*
20. *Decticus albifrons*

21. *Platycleis falx*
22. *Platycleis intermedia*
23. *Platycleis affinis*
24. *Platycleis sabulosa*
25. *Platycleis albopunctata*
26. *Platycleis tessellata*
27. *Metrioptera saussuriana*
28. *Metrioptera buyssoni*
29. *Metrioptera bicolor*
30. *Metrioptera roeselii*
31. *Sepiana sepium*
32. *Pholidoptera griseoptera*
33. *Yersinella raymondi*
34. *Ctenodecticus masferreri*
35. *Ctenodecticus thymi*
36. *Thyreonotus corsicus*
37. *Antaxius hispanicus*
38. *Antaxius chopardi*

Subfamily Saginae

39. *Saga pedo*

Subfamily Ehippigerinae

40. *Ehippiger ehippiger*
41. *Ehippigerida areolaria*
42. *Ehippigerida asella*
43. *Ehippigerida zapateri*
44. *Steropleurus martorellii*
45. *Steropleurus perezi*
46. *Steropleurus panteli*
47. *Steropleurus catalaunicus*
48. *Steropleurus ortegai*
49. *Uromenus rugosicollis*
50. *Platystolus monticola*
51. *Platystolus obvius*
52. *Pycnogaster sanchezgomezi*

Family Raphidophoridae

53. *Dolichopoda linderi*54. *Dolichopoda bolivari*

Family Gryllidae

Subfamily Gryllinae

55. *Gryllus campestris*56. *Gryllus bimaculatus*57. *Acheta domesticus*58. *Melanogryllus desertus*59. *Tartarogryllus bordigalensis*60. *Eugryllodes pipiens*61. *Gryllomorpha dalmatina*62. *Gryllomorpha uclensis*63. *Petaloptila aliena*64. *Petaloptila pyrenea*

Subfamily Nemobiinae

65. *Pteronemobius heydenii*66. *Pteronemobius lineolatus*67. *Nemobius sylvestris*

Subfamily Mogoplistinae

68. *Mogoplistes brunneus*69. *Arachnocephalus vestitus*

Subfamily Myrmecophilinae

70. *Myrmecophilus acervorum*

Subfamily Trigonidiinae

71. *Trigonidium cicindeloides*

Family Oecanthidae

72. *Oecanthus pellucens*

Family Gryllotalpidae

73. *Gryllotalpa gryllotalpa*

Suborder CAELIFERA

Family Tridactylidae

74. *Xya variegata*

Family Tetrigidae

75. *Paratettix meridionalis*76. *Tetrix subulata*77. *Tetrix ceperoi*78. *Tetrix bolivari*79. *Tetrix undulata*80. *Tetrix nutans*81. *Tetrix depressa*

Family Pyrgomorphidae

82. *Pyrgomorpha conica*

Family Pamphagidae

Subfamily Akicerinae

83. *Prionotropis flexuosa*

Subfamily Pamphaginae

84. *Acinipe sp.*85. *Kurtharzia nugatoria*86. *Ocnerodes brunneri*

Family Catantopidae

Subfamily Cyrtacanthacridinae

87. *Anacridium aegyptium*88. *Schistocerca gregaria*

Subfamily Catantopinae

89. *Pezotettix giornae*90. *Podisma pedestris*91. *Miramella alpina*92. *Bohemanella frigida*93. *Cophopodisma pyrenaea*

Subfamily Calliptaminae

94. *Calliptamus italicus*95. *Calliptamus barbarus*96. *Calliptamus wattenwylanus*97. *Paracaloptenus bolivari*

Subfamily Eyprepocnemidinae

98. *Eyprepocnemis plorans*

99. *Heteracris littoralis*

Family Acrididae

Subfamily Oedipodinae

- 100. *Psophus stridulus*
- 101. *Locusta migratoria*
- 102. *Oedaleus decorus*
- 103. *Celes variabilis*
- 104. *Oedipoda caerulea*
- 105. *Oedipoda germanica*
- 106. *Oedipoda fuscocincta*
- 107. *Oedipoda charpentieri*
- 108. *Sphingonotus caeruleus*
- 109. *Sphingonotus azureus*
- 110. *Sphingonotus arenarius*
- 111. *Mioscirtus wagneri*
- 112. *Acrotylus insubricus*
- 113. *Acrotylus patruelis*
- 114. *Acrotylus fischeri*
- 115. *Aiolopus thalassinus*
- 116. *Aiolopus strepens*
- 117. *Stethophyma grossum*
- 118. *Paracinema tricolor*
- 119. *Calephorus compressicornis*
- 120. *Parapleurus alliaceus*

Subfamily Acridinae

- 121. *Acrida ungarica*
- 122. *Truxalis nasuta*

Subfamily Gomphocerinae

- 123. *Brachycrotaphus tryxalicerus*
- 124. *Chrysochraon dispar*
- 125. *Euthystira brachyptera*
- 126. *Stauroderus scalaris*
- 127. *Chorthippus apricarius*
- 128. *Chorthippus brunneus*

129. *Chorthippus biguttulus*
130. *Chorthippus mollis*
131. *Chorthippus binotatus*
132. *Chorthippus apicalis*
133. *Chorthippus vagans*
134. *Chorthippus dorsatus*
135. *Chorthippus parallelus*
136. *Chorthippus jucundus*
137. *Chorthippus jacobsi*
138. *Euchorthippus declivus*
139. *Euchorthippus pulvinatus*
140. *Euchorthippus chopardi*
141. *Stenobothrus lineatus*
142. *Stenobothrus stigmaticus*
143. *Stenobothrus nigromaculatus*
144. *Stenobothrus fischeri*
145. *Stenobothrus festivus*
146. *Stenobothrus grammicus*
147. *Omocestus haemorrhoidalis*
148. *Omocestus raymondi*
149. *Omocestus burri*
150. *Omocestus viridulus*
151. *Omocestus rufipes*
152. *Omocestus antigai*
153. *Omocestus navasi*
154. *Gomphocerus sibiricus*
155. *Gomphoceridius brevipennis*
156. *Myrmeleotettix maculatus*
157. *Dociostaurus maroccanus*
158. *Dociostaurus jagoi*
159. *Arcyptera fusca*
160. *Arcyptera brevipennis*
161. *Ramburiella hispanica*

THE LIST OF THE 27 NEW SPECIES FOR CATALONIA IS AS FOLLOWS:

Phaneroptera falcata

Salardú, Naut Aran (Val d'Aran), UTM: 31TCH23, 1268 m, -7-1934, 1 **E**, F. Español leg., UB coll.

Isophya pyreneae

La Pobla de Lillet (Berguedà), UTM: 31TDG17, 1.600 m., 5-8-1991, 1 **G** and 1 **E**, J. Barat leg.; Castell de l'Areny (Berguedà), UTM: 31TDG17, 1.460 m, 6-8-1991, 1 **G**, J. Barat leg.; Fígols and Alinyà (Alt Urgell), UTM: 31TCG66, 1.280 m, 17-8-1995, 1 **E**, J. Barat leg.; Puigsagordi, Centelles (Osona), UTM: DG31T32, 950 m, 14-6-1985, 1 **G**; Ribera Barrados, Val d'Aran, UTM: 31TCH13, 1-7-1989, 1 **G**, J. & E. Vives leg.; Olzinelles, Sant Celoni (Vallès Oriental), UTM: 31TDG61, 253 m, 4-6-1998, 1 **G** and 1 **E**.

Barbitistes serricauda

El Pont de Suert (Alta Ribagorça), UTM: 31TCG19, 1.270 m, 27-7-1996, 1 **G**, J. Barat leg.; Baix Pallars (Pallars Sobirà), UTM: 31TCG48, 1.560 m., 28-7-1992, 2 **GG** and 2 **EE**, J. Barat leg.; Odèn (Solsonès), UTM: 31TCG76, 1.330 m, 1-8-1991, 1 **E**, J. Barat leg.; La Coma i La Pedra (Solsonès), UTM: 31TCG87, 1.640 m, 3-8-1991, 1 **G**, J. Barat leg.; Les Valls d'Aguilar (Alt Urgell), UTM: 31TCG48, 1420 m, 28-7-1992, 1 **G**, J. Barat leg.; Baix Pallars (Pallars Sobirà), UTM: 31TCG38, 1.250 m, 5-8-1992, 1 **G**, J. Barat leg.; Espot (Pallars Sobirà), UTM: 31TCH31, 1.760 m, 22-8-1992, 1 **E**, J. Barat leg.; Fígols i Alinyà (Alt Urgell), UTM: 31TCG66, 1.280 m, 30-8-1997, 1 **E**, J. Barat leg.; La Vansa i Fornols (Alt Urgell), UTM: 31TCG77, 1.450 m, 11-9-1998, 1 **G**, J. Barat leg.; Bellmunt, Sant Pere de Torelló (Osona), UTM: 31TDG46, 1.246 m, 21-7-1922, 1 **E**, Codina leg. MZB coll.; Sant Llorenç de Morunys (Solsonès), UTM: 31TCG86, 925 m, 28-7-1909, 1 **G**, MZB leg.; "Tuixent", Josa i Tuixén (Alt Urgell), UTM: 31TCG87, 1.207 m, 23-7-1920, 1 **G**, MZB leg.; Pla d'Aiats, Santa Maria de Corcó (Osona), UTM: 31TDG55, 1.303 m, 21-7-1922, 1 **G**, MZB leg.; Camí del Prat de Santuari de Cabrera, Santa Maria de Corcó (Osona), UTM: 31TDG55, 950 m, 29-7-1922, 3 **GG** and 1 nymph, A. Codina leg., MZB coll.; Planoles (Ripollès), UTM: 31TDG28, -8-2000, 1.136 m, 1 **G**; Comarmada, Gombrèn (Ripollès), UTM: 31TDG28, 14-9-1987, 1 **G**; Pont de l'Inglà, Bellver de Cerdanya (Baixa Cerdanya), UTM: 31TCG98, 6-8-1991, 1 **G**.

Polysarcus denticauda

Naut Aran (Val d'Aran), UTM: 31TCH23, 1.500 m, 29-7-1995, 1 **G**, J. Barat leg.; Vielha e Mijaran (Val d'Aran), UTM: 31TCH23, 1.700 m, 2-8-1995, 1 **G**, J. Barat leg.; Naut Aran (Val d'Aran), UTM: 31TCH23, 1.900 m, 2-8-1995, 1 **G**, J. Barat leg.; Bonabé, Alt Àneu (Pallars Sobirà), UTM: 31TCH43, 1.552 m, 15-6-1993, 1 **G**, 1 **E** and 1 nymph; Artiga de Lin (Val d'Aran) UTM: 31TCH13, 23-6-1995, 1 **G**, J. Muñoz leg.

Polysarcus scutatus

Farrera (Pallars Sobirà), UTM: 31TCH50, 1.680 m, 3-8-1992, 1 **G**, J. Barat leg.

Platycoleis falx

Timoneda d'Alfès, Alfès (Segrià), UTM: 31TCG00, 236 m, 12-6-2001, 1 **G** and 1 **E**; Sant Antolí (Segarra), UTM: 31TCG50, 580 m, 19-7-1999, 1 **G**; Vilaüt (Alt Empordà), UTM: 31TEG08, 75 m, -8-2000, 1 **G**.

Platycoleis affinis

Os de Balaguer (Noguera), UTM: 31TCG03, 463 m, 17-6-1995, 1 **E**; Menàrguens (Noguera), UTM: 31TCG12, 210 m, 1 **E**; Roses (Alt Empordà), UTM: 31TEG18, 5 m J. Barat leg.; Delfià (Alt Empordà), UTM: 31TEG08, 70 m, 22-7-1996, 1 **G**, 10-7-1997, 1 **E**; Lo Torricot, La Sentiu de Sió (Noguera), UTM: 31TCG23, 290 m, 14-6-1999; Sanaiüja (Segarra), UTM: 31TCG63, 1 **E**, 28-6-1999, 1 **E**, -8-2000,

3 **GG** and 1 **E**; Seró (Noguera), UTM: 31TCG43, 460 m, 21-7-1999, 1 **E**; Els Plans de Sió (Segarra), UTM: 31TCG42, 20-7-1999, 1 **E** observed not captured; Les Pallargues (Segarra), UTM: 31TCG52, 20-7-1999, 1 **E**; Castellnou d'Olugues (Segarra), UTM: 31TCG51, 1 **G** and 4 **EE**, 4-7-2000; Sant Antolí (Segarra), UTM: 31TCG60, 11-7-2000, 2 **GG** and 1 **E**; Tàrrega (Urgell), UTM: 31TCG41, 14-7-2000, 1 **E**; Verdú (Urgell), UTM: 31TCG40, 14-7-2000, 1 **G**; Golmés (Pla d'Urgell), UTM: 31TCG20, 14-7-2000, 1 **G**; Preixana (Urgell), UTM: 31TCG30, 328 m, 14-7-2000, 1 **G**; Montgai (Noguera), UTM: 31TCG32, 274 m, 18-7-2000, 1 **E**; La Sentiu de Sió (Noguera), UTM: 31TCG22, 18-7-2000, 1 **E**; Almatret (Segrià), UTM: 31TBF87, 485 m, 28-7-2000, 1 **G**, observed not captured; Freixenet (Segarra), UTM: 31TCG61, 670 m, 26-7-2000, 1 **E**.

Metrioptera saussuriana

Bonabé (Pallars Sobirà), UTM: 31TCH43, 1.552 m, 16-9-1992, 1 **G**; Collet de les Barraques, Planoles (Ripollès), UTM: 31TDG28, 1.900 m, 25-8-1990, 1 **G** and 2 **EE**; Coll d'Ares, Molló (Ripollès), UTM: 31TDG59, 9-8-1999, 1 **G** and 1 **E**; Farrera (Pallars Sobirà), UTM: 31TCH60, 1.550 m, 26-8-1991, 1 **G** and 1 **E**; La Vall d'en Bas (Garrotxa), UTM: 31TDG55, 1.100 m, 4-9-1993, 1 **G** and 1 **E**, J. Barat leg.; Montagut (Garrotxa), UTM: 31TDG68, 1.450 m, 15-8-1994, 1 **G**, J. Barat leg.; Pardines (Ripollès), UTM: 31TDG38, 1.380 m, 17-8-1994, 1 **G** and 1 **E**, J. Barat leg.; Molló (Ripollès), UTM: 31TDG49, 1.900 m, 22-8-1994, 1 **E**, J. Barat leg.; Naut Aran (Val d'Aran), UTM: 31TCH23, 1.500 m, 22-7-1995, 1 **G**, J. Barat leg.; Naut Aran (Val d'Aran), UTM: 31TCH32, 1.770 m, 30-7-1995, 1 **G** and 1 **E**, J. Barat leg.; Naut Aran (Val d'Aran), UTM: 31TCH22, 1.700 m, 3-8-1995, 1 **G**, J. Barat leg.; Naut Aran (Val d'Aran), UTM: 31TCH33, 1.640 m, 8-8-1995, 1 **G** and 1 **E**, J. Barat leg.; La Guingueta d'Àneu (Pallars Sobirà), UTM: 31TCH41, 1.780 m, 20-8-1995, 1 **E**, J. Barat leg.; Espot (Pallars Sobirà), UTM: 31TCH31, 1.760 m, 22-8-1995, not captured, observed J. Barat; Vielha e Mijaran (Val d'Aran), UTM: 31TCH12, 1.360 m, 25-7-1997, not captured, observed J. Barat; Adrell, La Torre de Capdella (Pallars Sobirà), UTM: 31TCG39, 1.086 m, 20-9-1992, 1 **E**.

Metrioptera buyssoni

Toran (Val d'Aran), UTM: 31TCH24, 1.000 m, 28-9-1985, 2 **GG** and 1 **E**; Canejan (Val d'Aran), UTM: 31TCH24, 1.030 m, 1-8-1995, 2 **EE**, J. Barat leg.

Metrioptera bicolor

Farrera (Pallars Sobirà), UTM: 31TCH60, 1.600 m, 26-8-1991, 1 **G** and 1 **E**, J. Barat leg.; La Guingueta d'Àneu (Pallars Sobirà), UTM: 31TCH42, 1.460 m, 12-8-1992, 3 **GG** and 2 **EE**, J. Barat leg.; Montagut (Garrotxa), UTM: 31TDG68, 1.450 m, 15-8-1994, 1 **G** and 1 **E**, J. Barat leg.; Molló (Ripollès), UTM: 31TDG58, 1.010 m, 19-8-1994, 2 **GG**, J. Barat leg.; Setcases (Ripollès), UTM: 31TDG49, 1.540 m, 22-8-1994, 1 **G**, J. Barat leg.; Vielha (Val d'Aran), UTM: 31TCH23, 1.450 m, 5-8-1995, 1 **G**, J. Barat leg.; Nevà, Toses (Ripollès), UTM: 31TDG28, 1.260 m, 30-8-1987, 1 **G** and 3 **EE**; Planoles (Ripollès), UTM: 31TDG28, 1.136 m, 31-8-1987, 1 **G**, 6-9-1987, 1 **G** i 1 **E**, 8-10-1988, 1 **G**, 15-8-1993, 3 **GG**, 29-8-1994, 1 **G**; Toses (Ripollès), UTM: 31TDG18, -8-2001, 2 **GG** not captured.

Metrioptera roeselii

Farrera (Pallars Sobirà), UTM: 31TCH50, 1680 m, 3-8-1992, 1 **E**, J. Barat leg.; Naut Aran (Val d'Aran), UTM: 31TCH33, 1640 m, 6-8-1992, 2 **GG**, J. Barat leg.; La Guingueta d'Àneu (Pallars Sobirà), UTM: 31TCH42, 1460 m, 12-8-1992, 1 **G** and 1 **E**, J. Barat leg.; Naut Aran (Val d'Aran), UTM: 31TCH32, 1770 m, 30-7-1995, 1 **G**, J. Barat leg.; Naut Aran (Val d'Aran), UTM: 31TCH22, 1450 m, 30-7-1995, 1 **E**, J. Barat leg.; Vielha e Mijaran (Val d'Aran), UTM: 31TCH12, 1460 m, 31-7-1995, 1 **G** and 2 **EE**, J. Barat leg.; Canejan (Val d'Aran), UTM: 31TCH24, 1030 m, 1-8-1995, 1 **G** and 1 **E**, J. Barat leg.; Canejan (Val d'Aran), UTM: 31TCH14, 1380 m, 1-8-1995, 1 **G**, J. Barat leg.; Lladorre (Pallars Sobirà), UTM: 31TCH52, 1300 m, 21-8-1995, 1 **G** and 1 **E**, J. Barat leg.; Varradós (Val d'Aran), UTM:

31TCH23, 5-8-1987, 1 **E**, X. Freneda leg.; Alins (Pallars Sobirà), UTM: 31TCH61, 1048 m, 15-9-1993, 1 **E**; Bonabé (Pallars Sobirà), UTM: 31TCH43, 1552 m, 10-9-1992, 1 **G**; Ribera de Cardós (Pallars Sobirà), UTM: 31TCH51, 23-7-1929, MZB coll.; Artiga de Lin (Val d'Aran), UTM: 31TCH13, 1550 m, 9-2000, 1 **G**.

Pholidoptera griseoptera

St. Hilari Sacalm (Selva), UTM: 31TDG53, 990 m, 4-8-1993, 1 **G** and 1 **E**, J. Barat leg.; Vilaller (Alta Ribagorça), UTM: 31TCH11, 1.300 m, 14-8-1993, 1 **E**, J. Barat leg.; La Vall d'en Bas (Garrotxa), UTM: 31TDG55, 1.100 m, 4-9-1993, 1 **G** and 1 **E**, J. Barat leg.; Vielha e Mijaran (Val d'Aran), UTM: 31TCH12, 1.460 m, 31-7-1995, 2 **EE**, J. Barat leg.; Canejan (Val d'Aran), UTM: 31TCH24, 1.030 m, 1-8-1995, 1 **G**, J. Barat leg.; Vielha e Mijaran (Val d'Aran), UTM: 31TCH23, 1.520 m, 2-8-1995, 1 **G**, J. Barat leg.; Naut Aran (Val d'Aran), UTM: 31TCH33, 1.640 m, 8-8-1995, 1 **E**, J. Barat leg.; Montesquiu (Ripollès), UTM: 31TDG36, 590 m, 20-10-1992, 1 **G**, G. Giribert leg. UB coll.; Santa Fe del Montseny, Fogars de Montclús (Vallès Oriental), UTM: 31TDG52, 1.050 m, 19-10-1986, 1 **G**; Cal Peire, Montellà i Martinet (Baixa Cerdanya), UTM: 31TCG99, 1.450 m, -8-1999, 1 **E**, UB leg.; Planoles (Ripollès), UTM: 31TDG28, 1.136 m, 6-9-1987, 2 **EE**; M de D. Bastanist (Baixa Cerdanya), UTM: 31TCG98, 1.250 m, 17-9-1991, 1 **G**, M Rovira leg.; Susqueda (Selva), UTM: 31TDG64, 281 m, 30-7-1996, 1 **G**; Setcases (Ripollès), UTM: 31TDG49, 1.275 m, 3 **GG**, MZB coll.; Osor (Selva), UTM: 31TDG64, 340 m, 25-8-1986, 1 **G** and 1 **E**, Muñoz leg.; Castell de l'Areny (Berguedà), UTM: 31TDG17, 954 m, 17-8-1990, 1 **G** and 1 **E**, J. Muñoz leg.; Sant Privat d'en Bas (Garrotxa), UTM: 31TDG56, 540 m, 18-10-1991, 1 **E**, J. Muñoz leg.; Ribes de Freser (Ripollès), UTM: 31TDG38, 908 m, 9-9-1986, 1 **E**, J. Muñoz leg.; Campdevàrol (Ripollès), UTM: 31TDG37, 738 m, 16-10-1989, 2 **EE**, J. Muñoz leg.

Antaxius chopardi

Capolat, UTM:31TDG95, 16-VIII-1995, 1 **G**, J. Barat leg.; Castellar de N'Hug, UTM:31TDG28, 15-8-1995, 1 **E**, J. Barat leg.; Navès, UTM:31TCG86, 15-8-1981, 1 **G** and 1 **E**, J. Barat leg.; Tagamanent, UTM:31TDG42, 11-9-1992, 3 **GG** and 2 **EE**, J. Barat leg.; Turó de l'Home, UTM:31TDG52, 1 h., 3-9-1989, 1 **E**; Gombrèn, UTM:31TDG28, 1 m, 15-8-1995, J. Barat leg.; La Vajol, UTM:31TDG89, 13-8-1995, 2 **GG** and 1 **E**, J. Barat leg.; Montagut, UTM:31TDG68, 15-8-1994, 1 **G**, J. Barat leg.; Maçanet de Cabrenys, UTM:31TDG79, 13-8-1995, 1 **G**, J. Barat leg.; Santa Pau, Garrotxa, UTM:31TDG66, 10-12-1994, 2 **EE**; Ogassa, UTM:31TDG37, 14-8-1995, 1 **E**, J. Barat leg.; Núria, Ripollès, UTM:31TDG39, 20-8-1919, 1 **E**, MZB coll.; Planoles (Ripollès), UTM:31TDG28, 26-10-1980, 1 **E**; 5-9-1987, 1 **G**; 6-9-1987, 1 **G**; 15-9-1990, 1 **E**; 5-10-1991, 4 **GG** and 3 **EE**; Santa Maria de Besora, UTM:31TDG36, 19-10-1920, 1 **G**, Codina leg., MZB coll.; Alins, Pallars Sobirà, UTM:31TCH61, 4-7-1994, 1 **E**; Santa Coloma, Andorra, UTM:31TCH70, 15-8-1993, 1 **G** and 1 **E**, J. Pujade leg.

Ephippigerida zapateri

La Sénia (Montsià), UTM: 31TBF61, 1.210 m, 23-7-1992, 1 nymph, J. Barat leg.; Tortosa (Baix Ebre), UTM: 31TBF72, 1.300 m, 22-8-1992, 3 **GG** and 2 **EE**, J. Barat leg.; Roquetes (Baix Ebre), UTM: 31TBF72, 23-8-1992, 1 **E**, J. Barat leg.

Steropleurus ortegai

Roquetes (Baix Ebre), UTM: 31TBF72, 1.420 m, 23-8-1992, 1 **G**, J. Barat leg.; La Sénia (Montsià), UTM: 31TBF61, 1.230 m, 10-8-1994, 1 **G**, J. Barat leg.

Platystolus monticola

Baix Pallars (Pallars Sobirà), UTM: 31TCG48, 1.550 m, 30-7-1990, 1 **G** and 1 **E**, J. Barat leg.; Les Vall de Valira (Alt Urgell), UTM: 31TCH60, 1.600 m, 16-8-1990, 1 **G**, J. Barat leg.; Motferrer i Castellbò (Alt Urgell), UTM: 31TCG59, 2.040 m, 27-8-1991, no captured, observ. J. Barat; Llavorsí (Pallars Sobirà), UTM: 31TCH50, 1.570 m, 10-8-1992, 1 nymph, J. Barat leg.; Conca de Dalt (Pallars Jussà),

UTM: 31TCG47, 1.900 m, 17-8-1995, 1 **E**, J. Barat leg.; Montferrer i Castellbó (Alt Urgell), UTM: 31TCG58, 1.580 m, 19-8-1995, 1 **E**, J. Barat leg.; Llessui, Sort (Pallars Sobirà), UTM: 31TCH40, 1.409 m, 15-9-1992, 6 **GG** and 2 **EE**; Puigforniu, Soriguera (Pallars Sobirà), UTM: 31TCG49, 1.113 m, 25-7-2001, 1 **G** and 1 **E**.

Pycnogaster sanchezgomezi

Tortosa (Baix Ebre), UTM: 31TBF72, 1.270 m, 19-6-2000, 1 **E**, J. Barat leg.; La Senia (Montsià), UTM: 31TBF61, 1.230 m, **GG** not captured, 10-8-1994, observ. J. Barat.

Gryllus campestris

Sant Feliu de Codines (Vallès Oriental), UTM: 31TDG31, 473 m, 27-6-1999, 1 nymph; La Cendrosa, Ivars d'Urgell (Pla d'Urgell), UTM: 31TCG21, 265 m, 26-10-1999, 1 nymph, F. Mañas leg.; Serra de Catllaràs, La Pobla de Lillet (Berguedà), UTM: 31TDG17, 21-6-1976, 1 **G** and 1 **E**, J. Muñoz leg.; Arbucies (Selva), UTM: 31TDG53, 295 m, 2-7-1983, 1 **E**, M i R. Pujol; Castissent (Pallars Jussà), 820 m, 1 nymph; Prats, Prats i Sansor (Baixa Cerdanya), UTM: 31TDG09, 1.118 m, 1 nymph; Serrat de Brocolús, Viu de Llevata (Alta Ribagorça), UTM: 31TCG19, 1.234 m, **GG** singer, not captured, 27-5-1999; Perves (Alta Ribagorça), UTM: 31TCG29, 1.180 m, 1 Nymph, 27-5-1999; Queralbs (Ripollès), UTM: 31TDG39, 1.230 m, **GG** singer, not captured, 3-8-1999; Vallfogona de Ripollès (Ripollès), UTM: 31TDG47, 966 m, 21-5-1985, 1 **E**, J. Muñoz leg.; Vilamanya (Ripollès), UTM: 31TDG38, 1.290 m, 11-7-1888, 1 **G**, J. Muñoz leg.; Planoles (Ripollès), UTM: 31TDG28, 1.136 m, (sense data), 2 **EE**; Refugi Serrat de les Esposes, Bellver de Cerdanya (Baixa Cerdanya), UTM: 31TCG99, 1.400 m, -9-1999, 3 nimfes, UB coll.; Torre de Sant Romà, Montellà i Martinet (Baixa Cerdanya), UTM: 31TCG98, 1.400 m, -9-1999, 3 nimfes, UB coll.; Roca Carbassa, La Seu d'Urgell (Alt Urgell), UTM: 31TCG78, 1.400 m, -9-1999, 3 Nimfes, UB coll.; La Seu d'Urgell (Alt Urgell), UTM: 31TCG79, 692 m, -9-1999, 3 nimfes, UB coll.; Puig Aguilar, Guixers (Solsonès), UTM: 31TCG86, 1 nymph, -9-1987; Vilaiüt (Alt Empordà), UTM: 31TEG08; Delfià (Alt Empordà), UTM: 31TEG09; Sant Pere de Torelló (Osona), UTM: 31TDG45, 31-7-1996, 1 nymph; Collada de Boixols (Pallars Jussà), UTM: 31TCG56, 1 nymph, 17-9-1999; Collada de Comallonga (), UTM: 31TCG28, 1 nymph, 20-9-1999; Barruera (Alta Ribagorça), UTM: 31TCH10, 1.130 m, 25-5-1987, 1 **G** and 1 **E**, X. Fresneda leg; Gerri de la Sal (Pallars Sobirà), UTM: 31TCG48, 591 m, 1 nymph, 27-6-2001; Coll del Canto (Pallars Sobirà), UTM: 31TCG59, **GG** cantant no capturats, 6-7-2001.

Acheta domesticus

Planoles (Ripollès), UTM: 31TDG28, 1.136 m, 2-9-1991, 1 **E**; St. Joan Despí (Baix Llobregat), UTM: 31TDF28, 10 m, (sense data completa), 1980, 1 **E**, A. Xaus leg.; Bellaterra (Vallès occidental), UTM: 31TDF29, 200 m, 2-7-1976, 1 **E**, J. Muñoz leg.; La Masó, Creixell (Tarragonès), UTM: 31TCF56, 50 m, 2-7-1996, 1 nymph; Vilabella (Alt Camp), UTM: 31TCF66, 254 m, 28-6-1996, 1 nymph.

Myrmecophilus acervorum

El Papiol, Baix Llobregat, UTM: 31TDF18, MZB coll.; Sant Cugat, Vallès Occidental, UTM: 31TDF29, X. Espadaler obs. personal;

Prionotropis flexuosa

Timoneda d'Alfès, Alfès (Segrià), UTM:31TCG00, 214 m, 14-5-1999.

Sphingonotus azurescens

Menàrguens (Noguera), UTM:31TCG12, 210 m, 26-7-1996, 1 **E**; Sanauja (Segarra), UTM: 31TCG63, 413 m, 8-7-1999, 2 **GG**; Castellfollit de Riubregós (Anoia), UTM: 31TCG72, 483 m, 1-9-1999, 1 **G**; Montgai (Noguera), UTM: 31TCG32, 274 m, 18-7-2000, 6 **GG**; Seròs (Segrià), UTM: 31TBF89, 102 m, 28-7-2000, 1 **G** and 1 **E**; Plana de l'Orgobé, La Granja d'Escarp (Segrià), UTM: 31TBF88, 79 m, 28-7-2000, 1 **G**; Almatret (Segrià), UTM: 31TBF87, 485 m, 28-7-2000, 1 **G**; Mas de Melons, Artesa de Lleida (Segrià), UTM: 31TCF09, 202 m, 26-7-1996, 1 **G**.

Sphingonotus arenarius

Els Muntanyans, Torredembarra (Tarragonès), UTM: 31TCF65, 4 m, 24-8-2000, 1 **E**; Castissent (Pallars Jussà), UTM: 31TCG06, 550 m, 2 **GG** and 2 **EE**.

Mioscirtus wagneri

Utxesa, Torres de Segre (Segrià), UTM: 31TBF99, 150 m, 21-6-1996, 3 **GG** and 1 **E**; Alcarràs (Segrià), UTM: 31TBG90, 130 m, 21-6-1996, 2 **GG**; Menàrguens (Noguera), UTM: 31TCG12, 210 m, 26-7-1996, 3 **GG** and 2 **EE**; Torreribera, Lleida (Segrià), UTM:31TCG00, 200 m, 5-7-2002, A. Renon leg.

Chrysochraon dispar

Bonabé, Alt Àneu (Pallars Sobirà), UTM: 31TCH43, 1.552 m, 16-9-1992, 1 **E**.

Euchorthippus declivus

Val d'Aran, -7-1909, 2 **EE**, M Llenàs leg. (MZB).

Dociostaurus maroccanus

Menàrguens (Noguera), UTM: 31TCG12, -7-1996, 1 **E** (in the broken up remains of the nest of a lesser kestrel, *Falco naumanni*); cap Norfeu, Roses (Alt Empordà), UTM: 31TEG17, 4-8-2000, 1 **E**; Coll del Pení, Roses (alt Empordà), UTM: 31TEG18, 28-6-2002, 3 **EE**.

Other interesting citations are:

Metaplastes pulchripennis

Begues (Baix Llobregat), UTM: 31TDF17, 450 m, 4-7-1992, 1 **E**, J. Barat leg.; Begues (Baix Llobregat), UTM: 31TDF17, 450 m, 11-7-1992, 1 **G**, J. Barat leg.; Vilalba Sasserra (Vallès Oriental), UTM: 31TDG50, 490 m, 29-6-1996, 1 **G** and 1 **E**, J. Barat leg.; Sant Celoni (Vallès Oriental), UTM: 31TDG61, 600 m, 20-7-1996, 1 **G** and 2 **EE**.

Ephippigerida areolaria

Roquetes (Baix Ebre), UTM: 31TBF72, 1.420 m, 23-8-1992, 2 **GG**, J. Barat leg.; Mont Caro, Tortosa (Baix Ebre), UTM: 31TBF72, 1.420 m, 1-7-2000, 2 **EE**, 13-8-2000, 1 **G**.

Ephippigerida asella

Conca de Dalt (Pallars Jussà), UTM: 31TCG47, 1.195 m, 18-8-1995, 1 **G** and 1 **E**, J. Barat leg.; Les Valls d'Aguilar (Alt Urgell), UTM: 31TCG58, 1.440 m, 31-7-1990, 1 **G** and 1 **E**, 18-8-1995, 2 **GG** and 2 **EE**, J. Barat leg.; Les Valls d'Aguilar (Alt Urgell), UTM: 31TCG48, 1.440 m, 28-7-1992, 1 **G** and 2 nimfes, J. Barat leg.; Odèn (Solsonès), UTM: 31TCG76, 1.330 m, 1-8-1991, 1 **G** and 1 **E**, J. Barat leg.; Fígols i Alinyà (Alt Urgell), UTM: 31TCG66, 1.280 m, 17-8-1995, 2 **GG** and 2 **EE**, 30-8-1997, 1 , J. Barat leg.; El Miracle (Solsonès), UTM: 31TCG74, 840 m, -9-1906, 1 **E** (Holotipus), L. Navás leg. MZB coll.

Steropleurus panteli

La Morera de Montsant (Priorat), UTM: 31TCF27, 1.020 m, 28-8-2000, 1 **E**, J. Barat leg.

Platystolus obvius

El Pont de Suert (Alta Ribagorça), UTM: 31TCG19, 1.400 m, 28-7-1990, 1 **G** and 1 **E**, J. Barat leg.; Conca de Dalt (Pallars Jussà), UTM: 31TCG47, 1.820 m, 18-8-1991, 1**E**, J. Barat leg.; Cabó (Alt Urgell), UTM: 31TCG47, 1.900 m, 18-8-1991, 1 **G**, J. Barat leg.; Les Valls d'Aguilar (Alt Urgell), UTM: 31TCG48, 1.440 m, 28-7-1992, 1 **G** and 1 **E**, J. Barat leg.; St. Esteve de la Sarga (Pallars Jussà), UTM: 31TCG15, 1.510 m, 29-7-1992, 1 **G** singer. observation. J. Barat; El Pont de Suert (Alta Ribagorça), UTM: 31TCG29, 1.280 m, 14-8-1993, 1 ex. not captured, observ. J. Barat; Les Valls d'Aguilar (Alt Urgell), UTM: 31TCG58, 1.430 m, 18-8-1995, 2 **GG** and 1 **E**, J. Barat leg.; El Pont de Suert (Alta Ribagorça), UTM: 31TCG18, 1.480 m, 28-7-1996, spec. photographed, not captured., observ. J. Barat; Vilanova de Meià (Noguera), UTM: 31TCG35, 1.290 m, 14-9-1996, **GG** singer. observation. J. Barat;

Llimiana (Pallars Jussà), UTM: 31TCG25, 1.450 m, 14-9-1996, 1 **G** and 1 **E**, J. Barat leg.; Tremp (Pallars Jussà), UTM: 31TCG17, 1.400 m, 14-9-1997, 1 **G**, J. Barat leg.; Sarroca de Bellera (Pallars Jussà), UTM: 31TCG29, 1.490 m, 11-9-2000, 1 **G** and 1 **E**; Organyà (Alt Urgell), UTM: 31TCG67, 560 m, (sense data), 1 **G** Faura leg., UB coll.; Durro (Alta Ribagorça), UTM: 31TCH20, 1.384 m, 8-9-1987, 1 **G** and 2 **EE**, X. Fresneda leg.; Corroncui, El Pont de Suert (Alta Ribagorça), UTM: 31TCG29, 1.400 m, 21-9-1999, 1 **G**.

Mogoplistes brunneus

Vall de Sant Just, Collserola, Sant Just Desvern (Baix Llobregat), UTM: 31TDF28, 5 **EE**, *pitfall trap*, V. Bonet leg.

Kurtharzia nugatoria

Alfara de Carles (Baix Ebre), UTM: 31TBF82, 337 m, 1-5-1987, 1 **E**, 15-4-1992, 1 **E**, 3-9-1999, 1 **E**, X. Vázquez leg.; Lo Portell, Alfara de Carles (Baix Ebre), UTM: 31TBF72, 26-6-1997, 1 **G**; Pauils (Baix Ebre), UTM: 31TBF83, 378 m, 19-6-1993, 1 **G** and 1 **E**, J. Barat leg.; La Sénia (Montsià), UTM: 31TBF71, 399 m, 25-6-1994, 1 **E**, J. Barat leg.; Mola de Catí, Tortosa (Baix Ebre), UTM: 31TBF, 13-10-1986, 3 nimfes; Tortosa (Baix Ebre), UTM: 31TBF72, 30-8-1992, 1 **E**, J. Barat leg.; Coll de Membrano, Horta de Sant Joan (Terra Alta), UTM: 31TBF73, 22-6-2000, 1 **G** and 1 **E**; Mont Caro, Tortosa (Baix Ebre), UTM: 31TBF72, 1.420 m, 23-6-2000, 1 **G**.

Miramella alpina

Pleta de Casau (Val d'Aran), UTM: 31TCH13, 1.600 m, 22-9-1985, 1 **G**; Salt del Pish, Vielha e Mijaran (Val d'Aran), UTM: 31TCH23, 1.600 m, 1 **G** and 1 **E**, J. Muñoz leg.; Toran (Val d'Aran), UTM: 31TCH24, 1.035 m, 28-9-1985, 2 **GG** and 2 **EE**.

Heteracris littoralis

Punta de la Banya, Sant Carles de la Ràpita (Montsià), UTM: 31TCE09, 7-10-1990, 1 **E**; Sant Jordi, L'Ametlla (Baix Ebre), UTM: 31TCF13, 6-11-1995, 1 **G**; Estany Podrit, Montroig, L'Ametlla (Baix Ebre), UTM: 31TCF24, 6-11-1994, 1 ; Els Muntanyans, Torredembarra (Tarragonès), UTM: 31TCF65, 24-8-2000, 3 **GG** i 1 **E**; Platja de la Marquesa, Deltebre (Baix Ebre), UTM: 31TCF11, 18-10-1995, 1 **E**; Can Tunis, Delta de Llobregat (Baix Llobregat), UTM: 31TDF27, -10-1908, M. Llenàs leg., MZB coll.

Calephorus compressicornis

Prat de Llobregat (Baix Llobregat), UTM: 31TDF27, F. Ferrer leg. MZB coll.; Cal Nani, Delta de Llobregat (Baix Llobregat), UTM: 31TDF27, 31-10-1988, 1 **E**, 8-8-1989, 1 **G**, 8-9-1989, 1 **E**; Menàrguens (Noguera), UTM: 31TCG12, 26-7-1996, 2 **GG**; Aiguamolls de l'Empordà, UTM: 31TEG07, 27-7-1999, 2 **GG** and 2 **EE**; Els Muntanyans, Torredembarra (Tarragonès), UTM: 31TCF65, 24-8-2000, 3 **GG** and 1 **E**; Vilaüt (Alt Empordà), UTM: 31TEG08, 3-8-1999, *Pan trap*, D. Giralt leg.

Arcyptera brevipennis

Ager (Noguera), UTM: 31TCG15, 18-8-1996, 1 **G** and 2 **EE**.

Stenobothrus festivus

Artesa de Lleida (Segrià), UTM: 31TCF09, 280 m, 21-6-1996, 1 **E**; Menàrguens (Noguera), UTM: 31TCG12, 290 m, 7-6-1996, 1 **E**, 19-6-1997, 2 **EE**, 10-6-1998, 2 **GG** and 1 **E**; Timoneda d'Alfès, Alfès (Segrià), UTM: 31TCG00, 214 m, 1-5-1997, 4 **GG** and 2 **EE**; Basturs (Pallars Jussà), UTM: 31TCG36, 659 m, 28-6-2001, 1 **E**.

Stenobothrus fischeri

Mont Caro, Tortosa (Baix Ebre), UTM: 31TBF72, 1.420 m, 26-6-1997, 3 **GG** and 1 **E**.

Stenobothrus grammicus

Os de Balaguer (Noguera), UTM: 31TCG03, 463 m, 7-6-1996, 1 **E**, 10-6-1998, 1 **G** i 1 **E**; Montcaro UTM: 31TBF72, 26-6-1997, 1 **G**, 22-6-2000, 3 **GG** and 3 **EE**; Vilamajor (Noguera), UTM: 31TCG14, 19-6-1997, 5 **EE**.

SPECIES FILES:

***Phaneroptera falcata* (Poda, 1761)**

Presence

1 grid square (0.2 %).

Description

Body: 12 to 18 mm. Green. The flight organs have a paraptera shape, this means that the wings are longer than the tegmina, which reach the knees of the posterior femora. Antennae four times longer than the body. The cerci of the males are long and curved inwards. Subgenital plate of the male approximately the same width at the base as at the apex. Very wide ovipositor in the shape of a sickle.

Ecology

Found at 1268 m (Salardú, Naut Aran, Val d'Aran, UTM: 31TCH23, UB). Their preferences are unknown in the area of the study. From the bibliographical information it is a species that is present in bushy areas. It is a phytophagous species. It lays its eggs between the upper and lower parts of the leaves. Adults present in July.

Distribution

Have only been found in the Val d'Aran. Europe and Asia.

Status

Cited for the first time in Catalonia. Very rare species.

Bibliography

Antognoli & Zettel 1996; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 76 ; Chopard 1938 & 1951, p. 84; Defaut 1999, p.7; Harz 1969, p. 15; Herrera 1982, p. 5 and 1985; Nagy 1983 & 1987; Pinedo & Llorente 1988; Ragge & Reynolds, p. 111; Thorens 1984 & 1986 a; Uvarov 1948.

***Phaneroptera nana* (Fieber, 1853)**

Presence

60 grid squares (16.3 %).

Description

Body: 13 to 15 mm. Green, with small reddish marks all over its body. It is very similar to *Phaneroptera falcata*. The lateral lobes of the pronotum are slightly higher than they are wide. In contrast to *P. falcata* in which they are wider than they are high. Male cerci long and curved inwards. Subgenital plate of the male narrow at the apex and ovipositor of the female, in lateral view, is not at such a right angle as in *Phaneroptera falcata*.

Ecology

Present in: riverside woodland area, savannah-type meadow, fallow, cereal field margin, brambles, kermes oak, siliceous rockrose scrub and heath, calcicolous rosemary scrub, gypsum thyme, bushes and urban gardens. Found above 6 m (El Prat de Llobregat, Baix Llobregat, UTM: 31TDF27) up to 1150 m (Monistrol de Montserrat, Bages, UTM: 31TDG00, J. Barat coll.). Like *Ph. Falcata*, lays its eggs between the upper and lower parts of the leaves. Adults present from July to November.

Distribution

Pyrenees, Pre-Pyrenees, Empordà plains, Transversal mountain system, central high plateaux and basins, coastal mountain system and Mediterranean coast. Europe, North Africa and Central Asia.

Status

Synonymy: *Phaneroptera quadripunctata*. Not very abundant species.

Bibliography

Aguirre & Pascual 1988; Alonso & Herrera 1982; Baccetti 1963; Baccetti et al. 1995; Badih et al. 1997; Bailey & Rentz 1990; Barranco & Pascual 1993; Bellmann & Luquet 1995, p. 78; Chopard 1943, p. 101 and 1951, p. 86; Defaut 1999, p.7; Eiroa & Novoa 1987; Gangwere & Llorente 1992; Gangwere & Spiller 1995; Gómez et al. 1991; Harz 1969, p. 15; Herrera 1982, p. 5 and 1985; Llorente 1980; Lock 1999; Martorell i Peña 1879; Marty 1969; Massa 1998; Nagy 1983 and 1987; Naskrecki & Ünal 1995; Olmo 1990; Olmo-Vidal 1997, 2000 a and c ; Olmo-Vidal & Llimona 2000; Pardo et al. 1990, 1991 and 1993 a and b; Pinedo 1988; Pinedo & Llorente 1987 and 1988; Ragge 1968 and 1980; Ragge & Reynolds, p. 111; Schmidt 1989; Ünal 2000; Uvarov 1934.

Tylopsis lilifolia (Fabricius, 1793)

Presence

81 grid squares (22.1 %).

Description

Body: 13 to 23 mm. Can be green or pale brown. Antennae five times the length of the body. Prominent eyes. Pronotum longer than it is wide with rectangular lateral lobes, longer than they are high. Tympanum of front tibiae elongated, unlike the genus *Phaneroptera* in which they are oval. Legs very long. Wings longer than the tegmina. Long male cerci that gradually decrease from the base to the apex. Very short, curved ovipositor. Subgenital plate in the female with two incisions at the rear margin, which form three lobes with a sharp, protruding central one. The nymphs of the first stage have protuberances in the shape of spines.

Ecology

Present in: riverside woodland area, calcicolous rosemary scrub, siliceous rockrose scrub and heath, kermes oak, fallow and cereal field margin, cereal crops, brambles and savannah-type meadow. Lives above 20 m (Montgat, Maresme, 31TDF49, MZB coll.) up to 1280 m (Figols i Alinyà, Alt Urgell, UTM: 31TCG66, J. Barat coll.). Adults present from July to October.

Distribution

Pre-Pyrenees, Empordà plains, Transversal mountain system, central high plateaux and basins, Central Depression, coastal mountain system and coastal area. Southern Europe, North Africa (Algeria, Tunisia), Asia Minor and Central Asia.

Status

Synonymy: *Tylopsis thymifolia*. Not very abundant species.

Bibliography

Baccetti 1963; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 82; Chopard 1938, 1943 and 1951, p. 82; Cuní i Martorell 1887; Defaut 1999, p.7; Harz 1969, p. 17; Herrera 1982, p. 6; Llorente 1980; Martorell i Peña 1879; Marty 1969; Massa 1998; Naskrecki & Ünal 1995; Olmo-Vidal, 2000 a, b, c and 2001 a; Olmo-Vidal & Llimona 2000; Ponel & Hebrard 1988; Ragge & Reynolds, p. 114; Ragge 1964, 1968 and 1980; Schmidt 1989; Szijj 1992; Ünal 2000; Uvarov 1934 and 1948.

Isophya pyreneae (Serville, 1839)

Presence

5 grid squares (1.3 %)

Description

Body: 16 to 26 mm. Green with small black dots all over its body. Pronotum slightly raised in the metazona in the males. Very small tegmina, the same length as the pronotum or slightly longer in males and approximately half as short as the pronotum in females. Male cerci curved at the apex and crossed

above by the subgenital plate with a small tooth at the point. Ovipositor with the tip curved upwards and toothed at the apex with large separated teeth. Subgenital plate in the female trapezoidal, much wider than it is long with the rear margin continuous, without incisions, but slightly wavy.

Ecology

Present in: oak groves and holm-oak wood. Has been found on flowers. Found above 253 m (Olzinelles, Sant Celoni, Vallès Oriental, UTM: 31TDG61) up to 1600 m (La Pobla de Lillet, Berguedà, UTM: 31TDG17, J. Barat coll.). Adults present from July to October.

Distribution

Pyrenees, Pre-Pyrenees, central high plateaux and basins and northern part of the coastal mountain systems. Central and Southern Europe.

Status

Cited for the first time in Catalonia. Very rare species.

Bibliography

Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 84; Chopard 1938 and 1951, p. 90; Defaut 1999, p.8; Harz 1969, p. 40; Herrera 1982, p. 6; Ingrisich 1991; Marty 1961 and 1969; Nagy 1987; Ragge & Reynolds, p. 118.

***Barbitistes serricauda* (Fabricius, 1798)**

Presence

14 grid squares (3.8 %).

Description

Body: 15 to 20 mm. Male is green, with red legs and cerci. Females are green or brown. The male cerci are curved and crossed behind the subgenital plate, which is wide and with a slightly raised median carina. Subgenital plate of the male wide with a deep incision on the rear margin. Ovipositor with the upper margin curved at the tip.

Ecology

Present in: oak groves, box scrub and grassy edges of damp woodland. Has been found walking on the ground and climbing plants. Lives above 925 m (Sant Llorenç de Morunys, Solsonès, UTM:31TCG86, MZB leg.) up to 1760 m (Espot, Pallars Sobirà, UTM: 31TCH31, J. Barat coll.). Adults present from July to September.

Distribution

Pyrenees and Pre-Pyrenees. Central Europe, North Italy and Yugoslavia, Southeast Ukraine.

Status

Cited for the first time in Catalonia. Very rare species.

Bibliography

Bailey & Rentz 1990; Bellmann & Luquet 1995, p.86; Chopard 1951, p. 91; Defaut 1999, p. 8; Gangwere et al. 1985; Harz 1969, p. 7; Herrera 1982, p. 6; Marty 1969; Nagy 1987; Ragge & Reynolds, p. 120; Thorens 1984 and 1986 a.

***Barbitistes fischeri* (Yersin, 1854)**

Presence

22 grid squares (6.0 %).

Description

Body: 20 to 25 mm. General colouring variable, from green to brown. Short tegmina. Subgenital plate of the male with greatly raised longitudinal carina. Male cerci long and curved crossing under the subgenital plate. Ovipositor with the tip curved upwards and toothed. Female very similar to *B. serricauda*. According to the observations of Joan Barat the females of *B. fischeri* have a rounded lobe or callus at the base of the ventral laminae of the ovipositor in contact with the subgenital plate, and in *B. serricauda* in this area there is only a lateral fold without the callus.

Ecology

Present in: box scrub, riverside woodland and mountain meadow. Nymphs on tall vegetation and adults found lower on the plants or walking on the ground. Lives above 110 m (La Rierada, Molins de Rei, UTM:31TDF18) up to 1720 m (Toses, Ripollès, UTM: 31TDG18, J. Barat leg.). Adults present from July to September.

Distribution

Pyrenees, Pre-Pyrenees, Transversal mountain range, central high plateaux and basins and coastal mountain range. Southern Europe.

Status

Rare species.

Bibliography

Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 90; Chopard 1938 and 1951, p. 93; Defaut 1999, p. 8 ; Gómez et al. 1991; Harz 1969, p. 74; Herrera 1982, p. 7; Marty 1961 and 1969; Navás 1910; Olmo-Vidal 2000 a; Pardo et al. 1991 and 1993 Presa et al. 1983; Ragge & Reynolds, p. 122.

Metaplastes pulchripennis* (Costa, 1863)*Presence**

7 grid squares (1.9 %).

Description

Body: 16 to 21 mm. Pronotum approximately twice as long as it is wide. Male supra-anal shield with a protuberance on each side. Male cerci of the male curved and ending in a small terminal tooth. Subgenital plate of the male ending in a point almost as long as the cerci in dorsal view, with two projections on each side of a triangular evagination. In addition, the plate has a raised median carina, with small teeth on the apical part. The tegmina of the male are very short and reach the second abdominal tergite. In the female the tegmina are almost occult under the pronotum. Subgenital lamina of the female trapezoidal, wider than it is long, with a broad incision at the apex and two lateral tubercles. Thick ovipositor, straight at the base and curved at the apex with separated terminal teeth.

Ecology

Present in: riverside woodland area. Found above 184 m (Gualba, Vallès Oriental, UTM: 31TDG52) up to 1000 m (Els Cortals, Sant Hilari Sacalm, UTM: 31TDG53, J. Muñoz coll.). Adults present in July.

Distribution

Transversal mountain system and north of the Coastal mountain system. Cited by Herrera of Montserrat. Southern Europe.

Status

Very rare species.

Bibliography

Bailey & Rentz 1990; Chopard 1951, p. 95; Defaut 1999, p.8; Harz 1969, p. 82; Herrera 1982, p. 7.

Leptophyes punctatissima* (Bosc, 1792)*Presence**

44 grid squares (12.0 %).

Description

Body: 10 to 17 mm. Green body with dark red spots. Pronotum proportionally short. Reduced elytra reaching the rear margin of the second abdominal tergite in males and approximately the middle of this

tergite in females. Cerci of the male almost straight at the basal part and curved inwards at the apical part, much shorter than the subgenital plate. Subgenital plate of the male long, extending towards the apical edge, which is straight, without the median carina being raised. Ovipositor of the female is very flat and wide, shaped like a sickle, slightly ridged, but without large teeth at the apex. Subgenital plate in the female triangular and ending in a point.

Ecology

Present in: riverside woodland, heath, brambles, box scrub and grassy margins of damp woodland. Found above 110 m (La Rierada, Molins de Rei, Baix Llobregat, UTM: 31TDF18) up to 1720 m (Montferrer i Castellbò, Alt Urgell, 31TCH50, J. Barat coll.). Adults present from July to October.

Distribution

Pyrenees, Pre-Pyrenees, Transversal mountain system, central high plateaux and basins and north of the coastal mountain system. Europe.

Status

Not very abundant species.

Bibliography

Baccetti 1963 and 1992; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 94; Burgos & Herrera 1986; Chopard 1938 and 1951, p. 88; Defaut 1978, 1999, p. 9; Haes & Harding 1997; Harz 1969, p. 86; Herrera & Larumbe 1992; Herrera 1982, p. 7 and 1985; Isern-Vallverdú & Pardo 1990; Marshall & Haes 1988; Olmo-Vidal 2000 a; Pinedo 1988; Pinedo & Llorente 1988; Preston-Mafham 1990; Ragge & Reynolds, p. 122; Schmidt 1989; Thorens 1984 and 1986 a.

***Odontura aspericauda* (Rambur, 1839)**

Presence

2 grid squares (0.5 %).

Description

Body: 10 to 18 mm. Vertex furrowed on the dorsal. Cerci of the male almost straight, curved at the apex. Subgenital plate of the male has a carina. Thick ovipositor, gradually curving and with separated teeth on the two edges of the apex. Subgenital plate in the female trapezoidal, approximately as wide as it is long and with a small incision at the apex.

Ecology

Present in: maquis of European fan palm. Found above 177 m (Vallirana, Baix Llobregat, UTM: 31TDF18, MZB coll.) up to 375 m (Costes de Vallgrassa, Garraf, Begues, UTM: 31TDF07). Adults present in April.

Distribution

Coastal mountain system: until now, it had only been found in Catalonia in the Massís del Garraf. Iberian Peninsula.

Status

In regression. Very rare species.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Arcos & Pascual 1988; Barranco & Pascual 1993; Beiro et al. 1998; Gómez et al. 1991; Harz 1969, p. 90; Herrera 1982, p. 8; Llorente & Pinedo 1990; Morales-Agacino 1943; Olmo-Vidal 2000 c; Pardo et al. 1991 and 1993; Pascual 1978 a, b, c and d.

***Polysarcus denticauda* (Charpentier, 1825)**

Presence

3 grid squares (0.8 %).

Description

Body: 24 to 44 mm. Vertex, in dorsal view, three times wider than the first segment of the antennae. Rear margin of the pronotum straight. Elytra very small, in the female practically occult under the pronotum. The male has a long subgenital plate with the sides curved upwards and in dorsal view, longer than the cerci. Elongated ovipositor, denticulate at the tip. Subgenital plate in the female rounded at the apex.

Ecology

Present in: mountain meadows. Found above 1500 m (Bonabé, Alt Àneu, Pallars Sobirà, UTM: 31TCH43) up to 1900 m (Naut Aran, Val d'Aran, UTM: 31TCH23, J. Barat coll.). Adults present from June to August.

Distribution

Pyrenees. Only found in the central Pyrenees until now. European mountains: Carpats, The Balkans, Pyrenees, Abruzzes.

Status

Cited for the first time in Catalonia. Synonymy: *Orphanina denticauda*. Rare species.

Bibliography

Antognoli & Zettel 1996; Baccetti 1954 and 1963; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 100; Chopard 1951, p. 96; Defaut 1999, p.9; Harz 1969, p. 168; Herrera 1982, p. 8; La Greca 1975 and 1985; Nagy 1983 and 1987; Ragge & Reynolds, p. 128.

Polysarcus scutatus* (Brunner, 1882)*Presence**

1 grid square (0.2 %).

Description

Body: 33 to 37 mm. Vertex in dorsal view, twice as wide as the first segment of the antennae. Rear margin of the pronotum rounded. Cerci of the male curved inwards and ending in a point, extending beyond the subgenital plate. Subgenital plate in the female ending in a point at the apex. Species similar to *P. denticauda*, from which it can be distinguished, amongst other features, by the different width of the vertex.

Ecology

Present in: damp pasture. Found at 1680 m (Farrera, Pallars Sobirà, UTM: 31TCH50, J. Barat coll.). A single male found in August.

Distribution

Pyrenees. Only found in the Central Pyrenees until now. Mountainous areas of southern Europe: Pyrenees, Alps. Serbia and Northern Greece . North Africa (Algeria).

Status

Cited for the first time in Catalonia. Very rare species.

Bibliography

Bellmann & Luquet 1995, p. 76; Chopard 1951, p. 97; Defaut 1999, p.9; Harz 1969, p. 169; Herrera 1982, p. 9; La Greca 1994; Ragge & Reynolds, p. 131.

***Meconema thalassinum* (De Geer, 1773)**

Presence

9 grid squares (2.4 %).

Description

Body: 12 to 15 mm. Green with a yellow longitudinal stripe above the pronotum and with two black marks in the metazona. Carina of the pronotum only slightly marked in the metazona. Tegmina longer than the abdomen. Tenth tergite of the male short, with a large subgenital plate with short styles. Subgenital plate in the female pointed at the apex. Long male cerci. Long ovipositor, slightly curved upwards and without teeth at the tip, in contrast to *Cyrtaspis scutata*, which does have teeth.

Ecology

Present in: oak groves. During the night it is attracted by artificial light. Found above 590 m (Montesquiu, Ripollès, UTM: 31TDG36, UB coll.) up to 1136 m (Planoles, Ripollès, UTM: 31TDG28). Adults present from August to October.

Distribution

Pyrenees, Pre-Pyrenees, Transversal mountain system, central high plateaux and basins (eastern sector) and north of the Coastal mountain system. Europe. Northern Iberian Peninsula, Italy, Montenegro, southern Scandinavia, Great Britain.

Status

Synonymy: *Meconema thalassina*. Very rare species.

Bibliography

Baccetti 1963; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 102; Chopard 1938 and 1951, p. 99; Defaut 1999, p.9; Haes & Harding 1997; Harz 1969, p. 171; Herrera 1982, p. 9; Marshall & Haes 1988; Nagy 1987; Pinedo & Llorente 1983 and 1988; Ponel & Hebrard 1988; Preston-Mafham 1990; Ragge & Reynolds, p. 136; Schmidt 1989; Thorens 1984 and 1986 a; Vahed 1996.

Cyrtaspis scutata* (Charpentier, 1825)*Presence**

14 grid squares (3.8 %).

Description

Body: 13 to 20 mm. Can be green or pale brown. Pronotum proportionally very large, which hides the elytra in both sexes. Posterior femora short and wide. Long male cerci. Subgenital plate of the male with an incision at the margin. Ovipositor curved upwards, toothed at the apex, in contrast to *Meconema thalassinum* in which it is smooth.

Ecology

Present in: riverside woodland and damp holm-oak wood. Found above 30 m (Sta. Cristina d'Aro, Baix Empordà, UTM: 31TDG92) up to 900 m (Barranc del Tillar, Muntanyes de Prades, Vimbodí, Conca de Barberà, UTM: 31TCF37, J. Solé coll.). Adults present from July to October.

Distribution

Coastal mountain system. Southern Europe and North Africa.

Status

Synonymy: *Cyrtaspis variopicta*. Rare species.

Bibliography

Bellmann & Luquet 1995, p. 76; Chopard 1938, 1943, p. 110 and 1951, p. 101; Defaut 1999, p.10; Harz 1969, p. 173; Herrera 1982, p. 9; Olmo-Vidal 2000 a; Pinedo & Llorente 1983 and 1988; Schmidt 1989; Vahed 1996.

Conocephalus conocephalus (Linnaeus, 1767)

Presence

11 grid squares (3.0 %).

Description

Body: 12 to 19 mm. Green with a dark stripe, which extends dorsally along the whole body. The lateral lobes of the pronotum have an oval structure in the posterior margin that coincides with the opening of the tympanum. In *C. conocephalus* it is elongated and in *C. discolor* it is rounded and globular. Tenth abdominal tergite of the male with a deep oval incision. Prosternum without spines in contrast to *C. discolor* which has two spines in this structure. Cerci of the male conical, toothed on the inner face near the base and with the teeth facing the front of the body. Ovipositor long and straight, with plain edges. Subgenital plate in the female longer than it is wide, straight at the posterior margin.

Ecology

Present in: river grassland. Found above 6 m (El Prat de Llobregat, Baix Llobregat, UTM: 31TDF27) up to 443 m (Olot, Garrotxa, UTM: 31TDG57, MZB coll.). Generally found on graminaceae in flooded areas. Adults present from July to October.

Distribution

Empordà plains and Coastal area. Penetrates inwards through the low sections of rivers. Southern Europe and Africa.

Status

Rare species.

Bibliography

Bailey & Rentz 1990; Chopard 1943, p. 112 and 1951, p. 103; Defaut 1999, p.10; Gangwere & Llorente 1992; Gómez et al. 1991; Harz 1969, p. 184; Herrera 1982, p. 10; Massa 1998; Naskrecki & Únal 1995; Olmo 1990; Pardo et al. 1991 and 1993; Pinedo 1984; Ragge & Reynolds, p. 138; Schmidt 1989.

Conocephalus discolor (Thunberg, 1815)

Presence

25 grid squares (6.8 %).

Description

Body: 12 to 19 mm. Green with a brown stripe along the whole body. Prosternum with two spines. Lateral lobes of the pronotum with the posterior margin rounded with an oval hard patch. Tenth abdominal tergite with two lobes at the posterior margin, separated by a small incision. Cerci of the male conical, toothed on the inner face of the apical third. Ovipositor long and slightly curved upwards, with the edges slightly ridged. Subgenital plate in the female trapezoidal, with the posterior margin with a very shallow wide incision.

Ecology

Present in: river grassland, high marsh grassland, rushes, damp meadow of the Empordà plain and mountain meadows. Found above 5 m (Sant Pere Pescador, Alt Empordà, UTM: 31TEG07) up to 1136 m (Planoles, Ripollès, UTM: 31TDG28). Adults present from July to October.

Distribution

Pyrenees (eastern part), Pre-Pyrenees, Empordà plains, central high plateaux and basins, Coastal mountain system and Coastal area. Europe and North Africa.

Status

Synonymy: *Conocephalus fuscus*. Rare species.

Bibliography

Alonso & Herrera 1982; Baccetti 1992; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 106; Burgos & Herrera 1986; Chopard 1938, 1943, p. 113 and 1951, p. 104; Defaut 1999, p. 10; Eiroa & Novoa 1987; Gómez et al. 1991;

Haes & Harding 1997; Harz 1969, p. 188; Herrera 1982, p. 10 and 1985; Herrera & Larumbe 1992; Lock 1999; Marshall & Haes 1988; Nagy 1983 and 1987; Naskrecki & Ünal 1995; Pardo et al. 1990; Pardo et al. 1991 and 1993a, b; Pinedo & Llorente 1988; Pinedo 1984 and 1988; Ponel & Hebrard 1988; Ragge & Reynolds 1998, p. 140; Uvarov 1934.

***Ruspolia nitidula* (Scopoli, 1786)**

Presence

59 grid squares (16.1 %).

Description

Body: 20 to 33 mm. Head very conical. Green or brown. Cerci of the male short and widening at the apex, curved, with two small apical teeth. Subgenital plate with two carinae, with the posterior margin with an incision. Ovipositor almost as long as the length of the body.

Ecology

Present in: riverside woodland, reed bed, damp and semi-damp pasture, damp meadow of the Empordà plain, rushes, riverside grassland and high marsh grassland. Lives above 6 m (El Prat de Llobregat, Baix Llobregat, UTM: 31TDF27) up to 1200 m (Turó del Castellar, Fogars de Montclús, Vallès Oriental, 31TDG52). Adults present from July to October.

Distribution

Pyrenees, Pre-Pyrenees, Empordà plains, Transversal mountain system, central high plateaux and basins, Coastal mountain system and coastal area. Southern Europe and North Africa.

Status

Synonymy: *Homorocoryphus nitidulus*. Not very abundant species.

Bibliography

Aguirre & Pascual 1988; Baccetti 1963; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 109; Bland et al. 1996; Braun et al. 1995; Burgos & Herrera 1986; Chopard 1951, p. 106; Defaut 1978 and 1999, p.11; Eiroa & Novoa 1987; Gangwere & Llorente 1992; Gómez et al. 1991; Hartley et al 2000; Harz 1969, p. 192; Herrera 1982, p. 11 and 1985; Herrera & Larumbe 1992; Llorente 1968 and 1980; Lock 1999; Massa 1998; Nagy 1983 and 1987; Olmo 1990; Olmo-Vidal 2000 a and c; Pardo et al. 1990 and 1991; Pinedo 1984; Pinedo & Llorente 1987 and 1988; Ragge & Reynolds 1998, p. 146; Schmidt 1989; Szijj 1992; Ünal 2000.

***Tettigonia viridissima* (Linnaeus, 1758)**

Presence

97 grid squares (26.5 %).

Description

Body: 28 to 42 mm. Usually green, sometimes brown. Pronotum with a brown longitudinal stripe, situated in the middle, in the green specimens. Tegmina much longer than the posterior femora in repose. Cerci of the male long, with an inner tooth near the base. Ovipositor almost as long as the body, slightly curved downwards. Subgenital plate in the female twice as long as wide, with two lateral carinae that are very marked and parallel throughout, and a deep but very narrow incision in the apical margin. This incision makes two lobes that almost touch each other at the base.

Ecology

Present in: riverside woodland, heath, brambles, box scrub, grassy margins of damp woodland, false brome, damp and semi-damp pasture, swath meadow, damp meadow of the Empordà plain, reed bed, rushes, cultivated land, riverside grassland, high marsh grassland and fallow and cereal field margin. Lives above 15 m (Torredembarra, Tarragonès, 31TCF65, J. Muñoz coll.) up to 1830 m (Farrera, Pallars Sobirà, 31TCH60, J. Barat coll.). Adults present from June to September.

Distribution

Throughout Catalonia. Europe and North Africa

Status

Synonymy: *Locusta viridissima*. Not very abundant species.

Bibliography

Alonso & Herrera 1982; Antognoli & Zettel 1996; Arcos & Pascual 1988; Baccetti 1963 and 1992; Baccetti et al. 1995; Bailey & Rentz 1990; Beiro et al. 1998; Bellmann & Luquet 1995, p. 110; Burgos & Herrera 1986; Chapman & Joern 1990; Chopard 1938, 1943, p. 116 and 1951, p. 107; Cuní i Martorell 1887; Defaut 1999, p.11; Dreux 1961; Eiroa & Novoa 1987; Fischer et al. 1996; Gangwere & Llorente 1992; Gómez et al. 1991; Haes & Harding 1997; Harz 1969, p. 196; Hernández et al. 1998; Herrera 1982, p. 12 and 1985; Herrera & Larumbe 1992; Isern-Vallverdú & Pardo 1990; Llorente 1980; Lock 1999; Marshall & Haes 1988; Martorell i Peña 1879; Marty 1969; Nagy 1983 and 1987; Naskrecki & Ünal 1995; Olmo-Vidal 2000 a; Pardo et al. 1991 and 1993 a, b; Pascual 1978 a, b, c and d; Pinedo 1985 and 1988; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Pulido 1990; Ragge & Reynolds 1998, p. 148; Schiemenz 1981; Schmidt 1989; Thorens 1984 and 1986 a; Ünal 2000; Uvarov 1934.

Tettigonia cantans* (Fuessly, 1775)*Presence**

14 grid squares (3.8 %).

Description

Body: 23 to 33 mm. Green. Cerci of the male very long with an inner tooth very close to the base, hardly visible from above. Tegmina approximately the same length as the posterior femora in repose. Ovipositor straight, longer than the tegmina. It is a species similar to *T. viridissima* but in *T. cantans* the elytra are shorter and just reach the length of the posterior femora, and in the case of the females of *T. cantans* the ovipositor is uncovered, in contrast to *T. viridissima* in which it is covered by elytra along its whole length. The subgenital plate in the female is similar to that of *T. viridissima*, but the two longitudinal carinae are more separated at the base and later run parallel. The incision of the margin is not as deep and narrow, so that the lobes are separated.

Ecology

Present in: Grassy edges of damp woodland, damp and semi-damp pasture and swath meadow. Found above 630 m (Les, Val d'Aran, 31TCH14, MZB coll.) up to 1770 m (Naut Aran, Val d'Aran, 31TCH32, J. Barat coll.). Adults present from July to August.

Distribution

Pyrenees. In two nuclei, one in the Central Pyrenees (Pallars Sobirà and Val d'Aran) and the other nucleus in the Eastern Pyrenees (Ripollès). Europe and Asia.

Status

Synonymy: *Locusta cantans*. Rare species.

Bibliography

Baccetti 1954 and 1963; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 112; Chopard 1938 and 1951, p. 109; Defaut 1978 and 1999, p.11; Dreux 1961; Harz 1969, p. 197; Herrera 1982, p. 12; La Greca 1975, 1985 and 1994; Martorell i Peña 1879; Marty 1961 and 1969; Pinedo 1985; Preston-Mafham 1990; Ragge & Reynolds 1998, p. 153; Schiemenz 1981; Schmidt 1989.

Decticus verrucivorus* (Linnaeus, 1857)*Presence**

29 grid squares (7.9 %).

Description

Body: 24 to 44 mm. Colour can vary greatly, from green to dark brown. Cerci with an inner tooth in the middle. Tenth tergite of the male with an incision that reaches the middle of the whole length of the tergite. Ovipositor slightly curved upwards, a little toothed at the apex. Subgenital plate in the female triangular with a quadrangular incision at the apex, which forms two small lobes.

Ecology

Present in: Alpine and subalpine meadow and swath meadow. Found at relatively low altitudes in the Val d'Aran: 630 m (Les, UTM: 31TCH14, MZB coll.); 906 m (Canejan, 31TCH14, J. Muñoz coll.) up to 2430 m (Soriguera, Pallars Sobirà, UTM: 31TGC59). Adults present from July to August.

Distribution

Central Pyrenees and Pre-Pyrenees. Europe and Asia.

Status

Not very abundant species.

Bibliography

Alonso & Herrera 1982; Antognoli & Zettel 1996; Baccetti 1954; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 114; Burgos & Herrera 1986; Cherrill & Brown 1997; Chopard 1951, p. 153; Defaut 1978 and 1999, p. 12; Dreux 1961; Fischer et al. 1996; Haes & Harding 1997; Harz 1969, p. 213; Herrera 1982, p. 13 and 1985; Herrera & Larumbe 1992; Isern-Vallverdú 1990; Isern-Vallverdú & Pardo 1990; Kleukers 1990; La Greca 1975 and 1985; Marshall & Haes 1988; Martorell i Peña 1879; Marty 1961 and 1969; Mossot & Ewald 1994; Nagy 1983 and 1987; Pinedo & Llorente 1988; Preston-Mafham 1990; Ragge & Reynolds 1998, p. 157; Schmidt 1989; Ünal 2000.

Decticus albifrons* (Fabricius, 1775)*Presence**

48 grid squares (13.1 %).

Description

Body: 32 to 38 mm. Pale brown with black marks. Cerci of the male toothed at the base with the tooth hardly visible from above as it is hidden under the tenth tergite, which is quadrangular and has a small incision. Ovipositor long with teeth at the apex. Subgenital plate in the female quadrangular with a small rounded incision.

Ecology

Present in: brambles, false brome, damp meadow of the Empordà plain, rushes and fallow and cereal field margin. Lives from almost sea level to 6 m (Llança, Alt Empordà, 31TEG19) up to 1020 m (Montblanc, Baix Camp, 31TCF37). Adults present from July to October.

Distribution

Pre-Pyrenees, Empordà plains, central high plateaux and basins (western sector), Central Depression, Coastal mountain system and coastal area. Europe, North Africa and Asia.

Status

Not very abundant species.

Bibliography

Aguirre et al. 1987; Baccetti et al. 1995; Bailey & Rentz 1990; Barranco & Pascual 1993; Bellmann & Luquet 1995, p. 116; Bland et al. 1996; Burgos & Herrera 1986; Chopard 1938, 1943, p. 130 and 1951, p. 84; Cuní i Martorell 1887; Defaut 1999, p.12; Gangwere & Llorente 1992; Gómez et al. 1991; Gómez-Ladrón de Guevara & Presa 1990; Harz 1969, p. 216; Herrera 1982, p. 14; Lock 1999; Martorell i Peña 1879; Marty 1961 and 1969; Massa 1998; Naskrecki & Ünal 1995; Olmo 1990; Olmo-Vidal 2000 c; Pardo et al. 1991 and 1993; Pascual 1975, 1978 a, b, c and d; Pinedo 1988; Pulido 1990; Ragge & Reynolds 1998, p. 162; Ünal 2000.

Platycleis falx* (Fabricius, 1775)*Presence**

3 grid squares (0.8 %).

Description

Body: 25 to 27 mm. Brown. Cerci of the male ending in a conical shape with the inner teeth situated in the middle. Seventh sternum of the female has a large tubercle. Sixth tergite is slightly raised, seen in

profile. Subgenital plate in the female with a broad incision, which forms two lobes. Short and very broad ovipositor, curved upwards. It is a species that is very similar to *P. affinis*. The males of both species are practically impossible to distinguish morphologically, they can only be told apart by their song and their internal genitalia. On the whole, this difficulty extends to the whole genus *Platycleis* in which it is recommended to study the females to distinguish the species.

Ecology

Present in: damp meadow on the Empordà plain and fallow and cereal field margin. Found above 75 m (Vilauit, Pau, Alt Empordà, 31TEG08) up to 580 m (Sant Antolí, Ribera d'Ondara, Segarra, 31TCG60). Adults present from June to August.

Distribution

Empordà plains and central high plateaux and basins (western sector). Southern Europe and North Africa.

Status

Cited for the first time in Catalonia. Rare species.

Bibliography

Baccetti et al. 1995; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 125; Bland et al. 1996; Chopard 1943, p. 137 and 1951, p. 140; Defaut 1999, p.13; Gangwere & Llorente 1992; Gangwere & Spiller 1995; Gómez et al. 1991; Gómez-Ladrón de Guevara & Presa 1990; Harz 1969, p. 248; Herrera 1982, p. 14 and 1985; La Greca 1994; Massa 1998; Pardo et al. 1990; Pardo et al. 1991 and 1993; Ragge & Reynolds, p. 174.

***Platycleis intermedia* (Serville, 1839)**

Presence

10 grid squares (2.7 %).

Description

Body: 21 to 28 mm. Brown. Cerci of the male with an inner tooth in the middle. Ovipositor broad, curved upwards, approximately one and a half times the length of the pronotum. Seventh abdominal sternum of the female with a rounded transversal carina and near the apex, it has a small angled carina. Seen in profile, this sternum has two elevations: a central one and another apical one. Subgenital plate in the female with a broad incision that forms two large, rounded lobes. In addition, the plate has a deep, longitudinal incision.

Ecology

Present in: siliceous rockrose scrub and heath and dry Mediterranean meadow. Found above 17 m (Castelló d'Empuries, Alt Empordà, UTM: 31TEG07) up to 564 m (Paumeres, La Fatarella, Terra Alta, UTM: 31TBF86). Adults found from June to October.

Distribution

Empordà plains, Central Depression and tips of the Coastal mountain system. Southern Europe, North Africa and Asia.

Status

Rare species.

Bibliography

Arcos & Pascual 1988; Baccetti et al. 1995; Bailey & Rentz 1990; Barranco & Pascual 1991 and 1993; Bellmann & Luquet 1995, p. 125; Bland et al. 1996; Burgos & Herrera 1986; Cantarella & Sammartano 1976; Chopard 1940, 1943, p. 136 and 1951, p. 138; Defaut 1999, p.13; Gangwere & Llorente 1992; Gómez et al. 1991; Harz 1969, p. 244; Hernández et al. 1998; Herrera 1982, p. 15 and 1985; Llorente 1980; Marty 1969; Massa 1998; Naskrecki & Ünal 1995; Pardo et al. 1990; Pardo et al. 1991 and 1993 a, b; Pascual 1978 a, b, c and d; Pinedo 1988; Pulido 1990; Ragge & Reynolds 1998, p. 175; Szijj 1992; Ünal 2000.

***Platycleis affinis* (Fieber, 1853)**

Presence

21 grid squares (5.7 %).

Description

Body: 20 to 28 mm. Pale brown. The tenth tergite of the male has a rounded incision, which forms two triangular lobes ending in a point. Cerci of the male toothed in the middle. The males are very difficult to distinguish morphologically from the rest of the species of the genus, particularly in *P. intermedia*, *P. falx* and *P. sabulosa*. The female can be distinguished by the seventh abdominal sternum that has a rounded protuberance. The subgenital plate in the female has a broad U-shaped incision, which separates two lobes of the same width. Long ovipositor with a slight upward curve.

Ecology

Present in: damp meadow on the Empordà plain and fallow and cereal field margin. Found above 5 m (Roses, Alt Empordà, UTM: 31TEG18, J. Barat coll.) up to 670 m (Freixenet, Segarra, UTM: 31TCG61). Adults present from June to August.

Distribution

Empordà plains, central high plateaux and basins (western sector) and Central Depression. Europe, North Africa and Asia.

Status

Cited for the first time in Catalonia. Not very abundant species.

Bibliography

Arcos & Pascual 1988; Bailey & Rentz 1990; Beiro et al. 1998; Bellmann & Luquet 1995, p. 126; Chopard 1943, p. 137 and 1951, p. 140; Defaut 1999, p.13; Gangwere & Llorente 1992; Gómez et al. 1991; Gómez-Ladrón de Guevara & Presa 1990; Harz 1969, p. 248; Herrera 1982, p. 15 and 1985; Nagy 1983 and 1987; Pardo et al. 1990; Pardo et al. 1991 and 1993 a, b; Pascual 1978 a, b, c and d; Pinedo 1988; Ponel & Hebrard 1988; Ragge & Reynolds 1998, p. 169; Szijj 1992; Ünal 2000.

***Platycleis sabulosa* (Azam, 1901)**

Presence

25 grid squares (6.8 %).

Description

Body: 23 to 26 mm. Pale brown. Cerci toothed in the middle. Male with the tenth tergite with a broad, shallow incision forming two lobes, not very pointed. Seventh abdominal sternum of the female with a transverse carina, more marked on the sides. Long ovipositor with a slight upward curve. The lobes of the subgenital plate in the female are broad and the incision is wide and shallow.

Ecology

Present in: calcicolous rosemary scrub, thyme bushes, savannah-type meadows, coastal and river dune and fallow and cereal field margin. Found above 5 m (L'Estartit, Torroella de Montgrí, Baix Empordà, UTM: 31TEG15) up to 820 m (Castissent, Tremp, Pallars Jussà, UTM: 31TCG16). Adults present from June to October.

Status

Rare species.

Distribution

Pre-Pyrenees, Empordà plains, central high plateaux and basins, Central Depression and coastal area. Southern Europe and North Africa.

Bibliography

Aguirre & Pascual 1988; Arcos & Pascual 1988; Bailey & Rentz 1990; Barranco & Pascual 1993; Badih et al. 1997; Bellmann & Luquet 1995, p. 124; Bland et al. 1996; Burgos & Herrera 1986; Cantarella & Sammartano 1976; Chopard 1943, p. 136 and 1951, p. 84; Defaut 1999, p.13; Eiroa & Novoa 1987; Gangwere & Llorente 1992; Gómez et al. 1991; Gómez-Ladrón de Guevara & Presa 1990; Harz 1969, p. 244; Herrera 1982, p. 15; Lock 1999; Marty 1969; Massa 1998; Olmo-Vidal 2000 c and 2001 a; Pardo et al. 1990; Pardo et al. 1991 and 1993a, b; Pascual 1975; Pinedo 1988; Ragge & Reynolds 1998, p. 168.

***Platycleis albopunctata* (Goeze, 1778)**

Presence

101 grid squares (27.5 %).

Description

Body: 15 to 23 mm. Tenth tergite of the male with two triangular lobes separated by a "U"-shaped incision at the posterior margin. Cerci of the male with an inner tooth in the middle. The seventh sternum without a projection, with a flat surface. Subgenital plate in the female triangular, posterior margin has an incision that forms two terminal triangular lobes. Ovipositor straight and thick at the base, gradually curving from half way up.

Ecology

Present in: heath, brambles, box scrub, jonquil meadows, grassy edges of damp woodland, false brome, savannah-type meadows, mountain meadows and subalpine meadows. Found above 122 m (Sant Just Desvern, Barcelonès, UTM: 31TDF28) up to 1850 m (Prat de Jou, Planoles, Ripollès, UTM: 31TDG28). Adults present from June to November.

Status

Synonymy: *Platycleis grisea*. There are many subspecies: *P.a. maura*, *P.a. sculpta*, *P. a. hispanica* and *P. a. collina*. Not very abundant species.

Distribution

Pyrenees, Pre-Pyrenees, Transversal mountain system, central high plateaux and basins and Coastal mountain system. Europe, North Africa and Asia.

Bibliography

Alonso & Herrera 1982; Arcos & Pascual 1988; Baccetti 1992; Bailey & Rentz 1990; Barranco & Pascual 1991 and 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 120; Bland et al. 1996; Burgos & Herrera 1986; Chopard 1938 and 1951, p. 136; Defaut 1999, p.12; Gómez et al. 1991; Haes & Harding 1997; Harz 1969, p. 240; Herrera & Larumbe 1992; Herrera 1982, p. 15 and 1985; Isern-Vallverdú & Pardo 1990; Isern-Vallverdú 1990; Marshall & Haes 1988; Mossot & Ewald 1994; Mossot 1994; Olmo-Vidal 2000 a and c; Olmo-Vidal & Llimona 2000; Pardo et al. 1991 and 1993 a, b; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Pinedo 1988; Pulido 1990; Ragge & Reynolds 1998, p. 164; Thorens 1986 a.

***Platycleis tessellata* (Charpentier, 1825)**

Presence

93 grid squares (25.4 %).

Description

Body: 13 to 17 mm. Cerci of the male with an inner tooth situated at the third apical. Seventh sternum of the female, in lateral view, with a projection that ends suddenly at the terminal near the subgenital plate which has a broad incision with two terminal lobes. Short ovipositor, gradually curving from the base to the lower margin and angled at the upper margin.

Ecology

Present in: calcicolous rosemary scrub, siliceous rockrose scrub and heath, dry thorny scrub, thyme bushes, kermes oak, brambles, box scrub, jonquil meadows, false brome, savannah-type meadow, dry

field of false brome, continental wilderness, damp and semi-damp pasture and cultivated land and cereal field margin. Found above 56 m (Santa Coloma de Gramanet, Barcelonès, UTM: 31TDF29, MZB coll.) up to 1600 m (El Taga, Bruguera, Ripollès, UTM: 31TDG38). Adults present from June to October.

Distribution

Pyrenees, Pre-Pyrenees, Empordà plains, Transversal mountain system, central high plateaux and basins, Central depression and Coastal mountain system. Southern Europe, North Africa and Asia.

Status

Abundant species. Synonymy: *Tessellana tessellata*.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Alonso & Herrera 1982; Arcos & Pascual 1988; Baccetti 1963; Baccetti et al. 1995; Bailey & Rentz 1990; Barranco & Pascual 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 127; Bland et al. 1996; Burgos & Herrera 1986; Chopard 1943, p. 134 and 1951, p. 141; Defaut 1999, p.14; Dreux 1961; Eiroa & Novoa 1987; Gangwere & Llorente 1992; Gangwere & Spiller 1995; Gómez et al. 1991; Gómez-Ladrón de Guevara & Presa 1990; Harz 1969, p. 275; Hernández et al. 1998; Herrera & Larumbe 1992; Herrera 1982, p. 16 and 1985; Isern-Vallverdú & Pardo 1990; Llorente 1980; Lock 1999; Marty 1969; Massa 1998; Mossot & Ewald 1994; Olmo-Vidal 2000 c; Pardo et al. 1990; Pardo et al. 1991 and 1993 a, b; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Pinedo 1988; Pulido 1990; Ragge & Reynolds 1998, p. 178; Schmidt 1989.

***Metrioptera saussuriana* (Frey-Gessner, 1872)**

Presence

18 grid squares (4.9 %).

Description

Body: 16 to 24 mm. The tegmina are short and do not reach the tip of the abdomen. Cerci of the male with an inner tooth slightly curved situated between the mid and the third apical. Tenth tergite of the male with two thin lobes with the terminal part curved outwards. Subgenital plate in the female almost as long as wide, with a triangular incision at the apex. Ovipositor gradually curving from the base.

Ecology

Present in: juniper thicket, mountain and subalpine meadows. Found above 900 m (Astell, La Torre de Capdella, UTM: 31TCG39) up to 1900 m (Collet de les Barraques, Planoles, UTM: 31TDG28). Adults present from July to September.

Distribution

Pyrenees, in two separate nuclei: one in the Central Pyrenees and the other in the Eastern Pyrenees. Also found in the northern part of the Transversal mountain system. Europe.

Status

Cited for the first time in Catalonia. Rare species.

Bibliography

Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 134; Chopard 1951, p. 147; Defaut 1999, p.14; Dreux 1961; Harz 1969, p. 292; Herrera 1982, p. 17; La Greca 1985; Marty 1969; Mossot 1995; Olmo-Vidal 1992; Pinedo & Llorente 1988; Ragge & Reynolds 1998, p. 189; Voisin 1981.

***Metrioptera buyssoni* (Saulcy, 1887)**

Presence

1 grid square (0.2 %).

Description

Body: 18 to 24 mm. Lateral lobes of the pronotum of a uniform colour, without any pale stripe at the margin. The tegmina are shorter than the abdomen. Tenth tergite of the male with triangular, separated

lobes. Subgenital plate longer than it is wide, with a very deep incision in the margin, which forms very elongated lobes. Robust ovipositor, very slightly curved.

Ecology

Present in: grassy margins of damp woodland. Found between 1030 m (Canejan, Val d'Aran, UTM: 31TCH24, J. Barat coll.) and 1035 m (Sant Joan de Toran, Canejan, Val d'Aran, UTM: 31TCH24). Adults present from July to September.

Distribution

Pyrenees. (Central Pyrenees).

Status

Cited for the first time in Catalonia. Very rare species.

Bibliography

Bailey & Rentz 1990; Chopard 1951, p. 148; Defaut 1978 and 1999, p.14; Harz 1969, p. 292; Herrera 1982, p. 17 and 1985; Marty 1969; Olmo-Vidal 1992; Ragge & Reynolds 1998, p. 191.

***Metrioptera bicolor* (Philippi, 1830)**

Presence

8 grid squares (2.1 %)

Description

Body: 14 to 18 mm. Short tegmina that do not reach the tip of the abdomen, although there is a form with well-developed tegmina (macropterous) known as the *sieboldi* form. Tenth tergite of the male with two elongated lobes ending in a point. Subgenital plate in the female longer than it is wide, with a small incision at the posterior margin. Ovipositor, in lateral view, curved from the base of the lower margin and angled at the upper margin.

Ecology

Present in: heath, juniper thicket, grassy edges of damp woodland, damp and semi-damp pasture and swath meadow. Found above 1010 m (Molló, Ripollès, UTM: 31TDG58, J. Barat coll.) up to 1600 m (Farrera, Pallars Sobirà, UTM: 31TCH60, J. Barat coll.). Adults present from August to October.

Distribution

Pyrenees. Europe.

Status

Cited for the first time in Catalonia. Rare species.

Bibliography

Antognoli & Zettel 1996; Baccetti 1954 and 1963; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 131; Chopard 1938 and 1951, p. 150; Defaut 1999, p. 15; Dreux 1961; Fischer et al. 1996; Harz 1969, p. 301; Herrera 1982, p. 17 and 1985; Kindvall 1996 and 1999; La Greca & Messina 1982; La Greca 1985; Mossot & Ewald 1994; Nagy 1987; Pinedo & Llorente 1988; Puissant & Voisin 1999; Ragge & Reynolds 1998, p. 196; Thorens 1984; Thorens 1986 a; Voisin 1982.

***Metrioptera roeselii* (Hagenbach, 1822)**

Presence

14 grid squares (3.8 %).

Description

Body: 14 to 18 mm. Lateral lobes of the pronotum with pale stripes at the margin. The tegmina are short and reach just beyond half way up the abdomen. There is a form with long wings (macropterous) called the dilute form. The tenth tergite of the male has a shallow incision with the lobes rounded at the apex.

Ovipositor gradually curving upwards. Subgenital plate in the female broad with an incision that reaches half way up the plate.

Ecology

Present in: mountain meadows and grassy margins of damp woodland. Found between 630 m (Les, Val d'Aran, UTM: 31TCH14, MZB coll.) and 1770 m (Naut Aran, Val d'Aran, UTM: 31TCH32, J. Barat coll.). Adults present from July to August.

Distribution

Central Pyrenees. Europe.

Status

Cited for the first time in Catalonia. Rare species.

Bibliography

Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 128; Chopard 1938 and 1951, p. 151; Defaut 1978 and 1999, p.15; Dreux 1961; Fischer et al. 1996; Haes & Harding 1997; Harz 1969, p. 312; Herrera 1982, p. 18 and 1985; Kindvall et al. 1998; Marshall & Haes 1988M; Mossot & Ewald 1994; Nagy 1983 and 1987; Pinedo & Llorente 1988; Ragge & Reynolds 1998, p. 199; Voisin 1982.

***Sepiana sepium* (Yersin, 1854)**

Presence

25 grid squares (6.8 %).

Description

Body: 20 to 25 mm. Short tegmina. Posterior femora very long, greater than the length of the whole body. The lateral carinae of the pronotum are not marked. Cerci of the male long, with an inner tooth at the third apical. Subgenital plate in the female wider than it is long, with a longitudinal furrow in the middle. Long ovipositor, straight at the basal part and curved in the terminal region where it is denticulate at the two margins.

Ecology

Present in: riverside woodland and riverside grassland. Found above 350 m (Begues, Baix Llobregat, 31TDF07, J. Barat coll.) up to 1300 m (Tortosa, Baix Ebre, 31TBF72, J. Barat coll.). Adults present from July to October.

Distribution

Eastern Pre-Pyrenees, Transversal mountain system and Coastal mountain system. Southern Europe.

Status

Synonymy: *Metrioptera sepium*. Rare species.

Bibliography

Baccetti 1954 and 1963; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 136; Cantarella & Sammartano 1976; Chopard 1951, p. 145; Defaut 1999, p.15; Harz 1969, p. 323; Herrera 1982, p. 19; Navás 1929; Olmo-Vidal 2000 a; Ponel & Hebrard 1988; Ragge & Reynolds 1998, p. 178; Schmidt 1989; Únal 2000.

***Pholidoptera griseoptera* (De Geer, 1773)**

Presence

22 grid squares (6.0 %).

Description

Body: 13 to 18 mm. Tegmina very short in the male and in the form of small lobes in the female. Cerci of the male elongated and thin with a tooth at the base. Subgenital plate in the female short, wider than it is long. Long ovipositor with straight margins at the basal part that curve upwards in the distal part.

Ecology

Present in: heath, brambles, box scrub, edge of damp woodland area, mountain meadow and subalpine meadow. Found above 340 m (Osor, Selva, UTM: 31TDG64, J. Muñoz coll.) up to 2300 m (Prat d'Aguiló, Montellà and Martinet, Low Cerdanya, UTM: 31TCG98, UB coll.). Adults present from July to October.

Distribution

Pyrenees, Pre-Eastern Pyrenees and Transversal mountain system. Europe.

Status

Cited for the first time in Catalonia. Not very abundant species.

Bibliography

Alonso & Herrera 1982; Antognoli & Zettel 1996; Baccetti 1963; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 142; Chopard 1938, 1951, p. 130; Defaut 1978 and 1999, p.16; Dreux 1961; Haes & Harding 1997; Harz 1969, p. 355; Herrera & Larumbe 1992; Herrera 1982, p. 19 and 1985; Marshall & Haes 1988; Marty 1961 and 1969; Nagy 1983 and 1987; Pinedo & Llorente 1988; Preston-Mafham 1990; Ragge & Reynolds 1998, p. 203; Schmidt 1989; Thorens 1984 and 1986 a.

Yersinella raymondi* (Yersin, 1860)*Presence**

29 grid squares (7.9 %).

Description

Body: 12 to 17 mm. The cerci of the males are elongated and without internal teeth. Tegmina very short, particularly in the female, in which they are lobiform. Subgenital plate in the female triangular with a deep incision, with pointed lobes. Ovipositor, slightly curved upwards.

Ecology

Present in: Riverside woodland, brambles, kermes oak, false brome, savannah-type meadow and riverside grassland. Found above 19 m (Palafolls, La Selva, 31TDG71) up to 954 m (Castell de l'Areny, Berguedà, UTM:31TDG17, J. Muñoz coll.). Adults present from July to November.

Distribution

Eastern Pre-Pyrenees, Empordà plains, Transversal mountain system and coastal mountain system. Southern Europe.

Status

Rare species.

Bibliography

Baccetti 1963; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 150; Chopard 1940 and 1951, p. 121; Defaut 1999, p.17; Gómez-Ladrón de Guevara & Presa 1990; Harz 1969, p. 416; Herrera 1982, p. 19; La Greca 1974; Marty 1969; Olmo-Vidal 2000 a and c; Pardo et al. 1990 and 1993 b; Pulido 1990; Ragge & Reynolds 1998, p. 211; Schmidt 1989.

Ctenodecticus masferreri* (Bolívar, 1894)*Presence**

2 grid squares (0.5 %).

Description

Body: 8.5 to 11 mm. Very short tegmina in the form of small scales (squamiform). Tenth tergite of the male trapezoidal. Thick cerci approximately as wide as they are long with a straight inner tooth facing downwards. Subgenital plate in the female triangular with two lateral holes, not at the margin, as in *Ct. thymi*. Long ovipositor, going slightly upwards at the apex.

Ecology

Present in: dry meadow. Found above 758 m (Espinelles, Osona, UTM: 31TDG53, MZB. coll.) up to 1150 m (Collformic, El Brull, Osona, UTM: 31TDG42). Adults present from July to August.

Distribution

Montseny. Endemic to Catalonia.

Status

In regression. Not very abundant species.

Bibliography

Bailey & Rentz 1990; Galvagni 1989; Gangwere et al. 1985; Harz 1969, p. 447; Herrera 1982, p. 21; La Greca 1980; La Greca 1990; Morales-Agacino 1956; Olmo-Vidal 1999; Pascual 1978 e and 1980.

Ctenodecticus thymi* (Olmo-Vidal, 1999)*Presence**

7 grid squares (1.9 %).

Description

Body: 6.1 to 9.5 mm. Very short tegmina in the form of small scales (squamiform). Tenth tergite of the male rectangular. Cylindrical cerci longer than they are wide with a straight inner tooth. Subgenital plate longer than it is wide with two holes at the margin. Straight ovipositor.

Ecology

Present in: calcicolous rosemary scrub. Has been found above 450 m (Foradada, Noguera, UTM: 31TCG34) up to 1220 m (Ager, Noguera, UTM: 31TCG15, J. Barat coll.). Adults present from June to September.

Distribution

Central Pre-Pyrenees (Montsec). Endemic to Catalonia.

Status

Rare species.

Bibliography

Olmo-Vidal 1999.

Thyreonotus corsicus* (Rambur, 1839)*Presence**

54 grid squares (14.7 %).

Description

Body: 20 to 29 mm. Pronotum proportionally very large, covers the tegmina particularly in the female. Posterior femora very long. Cerci of the male quadrangular, without apparent inner tooth, with the inner margin continuous and the distal part conical. Subgenital plate in the female quadrangular, with two longitudinal carinae separated by a furrow. Ovipositor long and very straight.

Ecology

Present in: Mediterranean pine forest, holm-oak wood, maquis, calcicolous rosemary scrub, siliceous rockrose scrub and heath, kermes oak, brambles and savannah-type meadow. Found above 6 m (el Prat de Llobregat, Baix Llobregat, 31TDF27) up to 1460 m (Castell de l'Areny, Berguedà, 31TDG17, J. Barat coll.). Adults present from August to December.

Distribution

Pre-Pyrenees, Empordà plains, central high plateaux and basins and coastal mountain system. Southern Europe and North Africa.

Status

Rare species.

Bibliography

Alonso & Herrera 1982; Arcos & Pascual 1988; Bailey & Rentz 1990; Beiro et al. 1998; Bellmann & Luquet 1995, p. 152; Burgos & Herrera 1986; Chopard 1943 p. 125 and 1951 p. 119; Defaut 1999, p. 18; Gómez et al. 1991; Harz 1969, p. 452; Hernández et al. 1998; Herrera 1982, p. 22 and 1985; Martorell i Peña 1879; Marty 1969; Olmo 1990; Olmo-Vidal 2000 a, b and c; Pardo et al. 1991 and 1993 a, b; Pinedo & Llorente 1988.

Antaxius hispanicus* (Bolívar, 1887)*Presence**

43 grid squares (11.7 %).

Description

Body: 15 to 23 mm. Short tegmina, especially in the female, and lobiform. Broad cerci with the inner edge concave and finished in a conical apical part. Subgenital plate in the female as long as wide, without a longitudinal carina with a triangular incision. Straight ovipositor.

Ecology

Present in: alpine and sub-alpine meadow. Found above 1200 m (St. Jeroni, Monistrol de Montserrat, Bages, UTM: 31TDG00) up to 2450 m (Portella de Mantet, Setcases, Ripollès, UTM: 31TDG49, J. Barat coll.). Adults present from July to October.

Distribution

Pyrenees, Montseny and Montserrat.

Status

Not very abundant species.

Bibliography

Bailey & Rentz 1990; Bolívar 1887; Cazorro 1888; Chopard 1951, p. 117; Defaut 1999, p. 18; Gangwere et al. 1985; Harz 1969, p. 467; Herrera 1982, p. 23; Marty 1969; Navás 1910 b; Ragge & Reynolds 1998, p. 222.

Antaxius chopardi* Morales-Agacino, 1936*Presence**

16 grid squares (4.3 %)

Description

Body: 19 to 24 mm. Short tegmina, especially in the female, and lobiform. Broad cerci with the inner edge concave and finished in a conical apical part. Subgenital plate in the female the same length or slightly longer than it is wide, with a longitudinal carina and an oval incision at the side. Straight ovipositor.

Ecology

Present in: heath and box scrub. Found above 710 m (La Vajol, Alt Empordà, UTM: 31TDG89, J. Barat coll.) up to 1967 m (Núria, Ripollès, UTM: 31TDG39, MZB coll.). Adults present from July to December.

Distribution

Pyrenees and Montseny.

Status

Cited for the first time in Catalonia. Rare species.

Bibliography

Bailey & Rentz 1990; Barranco & Pascual 1993; Chopard 1951, p. 118; Defaut 1999, p.18; González-García 1987; Harz 1969, p. 466; Herrera 1982, p. 6; Kruseman & Jeekel 1968; Morales-Agacino 1936.

Saga pedo* Pallas, 1771*Presence**

3 grid squares (0.8 %).

Description

Body: 60 to 112 mm (ovipositor even in females). Very long body. Subgenital plate in the female triangular with a small incision in the apex. Tegmina of the males very short, reduced to stridulatory organs, in contrast, the females do not have tegmina. Very long ovipositor, denticulate in the apical region. The anterior and median tibiae and femurs have teeth on the lower part to catch insects on which they feed.

Ecology

Present in: siliceous rockrose scrub and heath and brambles. Has been found above 70 m (Delfià, Alt Empordà, UTM: 31TEG08) up to 1065 m (El Mascar, Tortosa, UTM: 31TBF72). It is a parthenogenetic species. In Catalonia, at present, we know of no male specimen. It has been found in the regurgitations of lesser kestrel (*Falco naumanni*) in the Empordà. In France, it has also been found in the regurgitations of the lesser kestrel and the common kestrel.

Distribution

Empordà plains and southern tip of the Coastal mountain system. Europe and Asia.

Status

Legally protected species in France. In danger of extinction in Switzerland. Very rare species.

Bibliography

Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 158; Chopard 1951, p. 156; Defaut 1999, p.19; Gangwere et al. 1985; Gómez et al. 1991; Harz 1969, p. 490; Herrera 1982, p. 24; Nagy 1987; Pardo et al. 1991 and 1993; Pinedo 1985; Pinedo 1988; Quidet 1988

Ephippiger ephippiger* (Fiebig, 1784)*Presence**

90 grid squares (24.5 %).

Description

Body: 19 to 30 mm. Pronotum without lateral carinae very marked in the metazona. Supra-anal shield of the male quadrangular, with very variable angles, more or less elongated. Cerci of the male cylindrical with an inner tooth in the middle. Long ovipositor slightly curving upwards. Elytra very short in both sexes.

Ecology

Present in: siliceous rockrose scrub and heath, heath, brambles, box scrub and juniper thicket. Found from almost sea level to 5 m (Tossa de Mar, Selva, UTM: 31TDG91) up to 2.050 m (Soriguera, Pallars Sobirà, UTM: 31TCG59). Adults present from July to October.

Distribution

Pyrenees, Pre-Pyrenees, Empordà plains, Transversal mountain system and Coastal mountain system. Europe.

Status

Synonymy: *Ephippiger vitium* and *E. cunii*. Not very abundant species.

Bibliography

Alonso & Herrera 1982; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 160; Burgos & Herrera 1986; Chopard 1938 and 1951, p. 160; Codina 1924; Defaut 1978 a, b and 1999, p.19; Dreux 1961; Duijm 1990; Hartley 1984; Harz 1966 and 1969, p. 501; Herrera & Larumbe 1992; Herrera 1982, p. 24 and 1985; Kidd & Ritchie 2000; Kleukers 1990; Martorell i Peña 1879; Marty 1961; Nagy 1987; Oudman et al. 1990 ; Peinado 1992; Pinedo & Llorente 1988; Ragge & Reynolds 1998, p. 227; Stiedl 1991; Thorens 1984 Thorens 1986 a; Vahed 1997.

Ephippigerida areolaria* (Bolívar, 1877)*Presence**

2 grid squares (0.5 %).

Description

Body: 18 to 24 mm. Pronotum with the lateral carinae very slightly marked in the metazona and proportionally short with regard to the body. Supra-anal shield of the male triangular with the apex very rounded. Conical cerci with an inner tooth situated closer to the base than to the apex, shorter than the supra-anal shield. Long ovipositor, almost as long as the posterior femur.

Ecology

Present in: box and dry thorny Mediterranean scrub. Found above 1300 m (Mola del Boix, Tortosa, UTM: 31TBF71) up to 1420 m (Roquetes, Baix Ebre, UTM: 31TBF72 J. Barat coll.). Adults present in August.

Distribution

Southern tip of the Coastal mountain system (Ports de Beceit). Iberian Peninsula.

Status

Not very abundant species.

Bibliography

Harz 1969, p. 528; Herrera 1982, p. 26; Pardo et al. 1991 and 1993; Peinado & Mateos 1988 a Pinedo & Llorente 1988; Pinedo 1988 Ragge & Reynolds, p. 238.

Ephippigerida asella* (Navás, 1907)*Presence**

6 grid squares (1.6 %).

Description

Body: 21 to 34 mm. Pronotum widened, approximately as long as wide. In lateral view, the raised metazona is higher than the prozona. Lateral carinae of the pronotum very slightly marked. Dark elytra with paler nerves. Supra-anal shield of the male triangular but with rounded margins. Small conical cerci, with the outer margin (in dorsal view) facing outwards and a small tooth situated in the middle. Ovipositor of the female long and slightly curved upwards.

Ecology

Present in: Box scrub. Found between 840 m (El Miracle, Riner, Solsonès, UTM: 31T CG74, MZB coll.) up to 1980 m (Conca de Dalt, Pallars Jussà, UTM: 31TCG47, J. Barat coll.). Adults present from July to September.

Distribution

Pre-Pyrenees.

Status

Its taxonomical situation still needs to be resolved, although we believe that it is a valid species. *E. marcei* is probably a synonym of *E. asella*. Rare species.

Bibliography

Gangwere et al. 1985; Harz 1969, p. 529; Herrera 1982, p. 27; Navás 1907.

Ehippigerida zapateri* (Bolívar, 1877)*Presence**

2 grid squares (0.5 %).

Description

Body: 27 to 32 mm. Pronotum with the lateral carinae not marked. Supra-anal shield of the male triangular. Cerci with an inner tooth and shorter than the supra-anal shield. Long ovipositor, one and a half times the length of the posterior femur.

Ecology

Present in: Mediterranean mountain undergrowth. Found above 1210 m (La Sénia, Montsià, UTM: 31TBF61, J. Barat coll.) up to 1420 m (Roquetes, Baix Ebre, UTM: 31TBF72, J. Barat coll.). Adults present from August to September.

Distribution

Southern tip of the Coastal mountain system (Ports de Beceit). Iberian Peninsula.

Status

Cited for the first time in Catalonia. Rare species.

Bibliography

Bailey & Rentz 1990; Gangwere et al. 1985; Gómez et al. 1991; Harz 1969, p. 532; Herrera 1982, p. 26; Pardo et al. 1991 and 1993; Peinado & Mateos 1988 a; Pinedo 1988; Pulido 1990; Vahed 1997.

Steropleurus catalaunicus* Bolívar, 1898*Presence**

40 grid squares (10.8%).

Description

Body: 16 to 26 mm. Lateral crests of pronotum marked in the metazona. Supra-anal shield of the male rounded. Cerci of the male ending in a small point with an inner tooth near the apex. Subgenital plate in the female rounded with a very small incision. Very long ovipositor, three times longer than the pronotum.

Ecology

Present in: dry pine forest, heath and box scrub. Found above 590 m (Montesquiu, Ripollès, UTM: 31TDG36, UB coll.) up to 1725 m (Soriguera, Pallars Sobirà, UTM: 31TCG59, J. Barat coll.). Adults present from August to December.

Distribution

Eastern Pyrenees, Pre-Pyrenees and an isolated case in Montserrat.

Status

Not very abundant species.

Bibliography

Bailey & Rentz 1990; Defaut 1999, p.21; Gangwere et al. 1985; Harz 1969, p. Herrera 569, p. 30; Isern-Vallverdú 1990; Navás 1910; Ragge & Reynolds 1998, p. 242; Vahed 1997.

Steropleurus perezii* (Bolívar, 1877)*Presence**

56 grid squares (15.3 %).

Description

Body: 23 to 35 mm. Lateral crests of pronotum highly marked in the metazona. Tegmina with very thick, yellow reticulation, leaving hardly any space. Supra-anal shield of the male triangular and separated from the tenth tergite. Conical cerci with an inner tooth in the middle. Short ovipositor curving upwards at the tip, very variable in length depending on the location. Very similar to *St. martorelli*, although they can be distinguished by the elytral reticulation, which is much more dense in *St. perezii*.

Ecology

Present in: maquis, calcicolous rosemary scrub, thyme bushes and kermes oak. Found from almost sea level to 20 m (L'Ametlla de Mar, Baix Ebre, UTM: 31TCF12) up to 1420 m (Roquetes, Baix Ebre, UTM: 31TBF72, J. Barat coll.). Adults present from June to November.

Distribution

Central Pre-Pyrenees, central high plateaux and basins, Central depression, Coastal mountain system and coastal area. Iberian Peninsula.

Status

Not very abundant species.

Bibliography

Badih et al. 1997; Gangwere et al. 1985; Gómez et al. 1991; Harz 1969, p. 563; Herrera 1982, p.28; Navás 1910; Olmo-Vidal 2000 a, b and c; Pardo et al. 1990; Pardo et al. 1991 and 1993 a, b; Peinado & Mateos 1988 b; Ragge & Reynolds 1998, p. 246; Vahed 1997.

Steropleurus martorellii* (Bolívar, 1877)*Presence**

1 grid square (0.2 %).

Description

Body: 26 to 32 mm. Lateral crests of pronotum highly marked on the metazona. Tegmina with not very dense reticulation with very clear dark spaces. Supra-anal shield of the male triangular and separated from the tenth tergite, which has a straight posterior margin. Conical cerci with an inner tooth at the third basal. Straight ovipositor, shorter than the posterior femur.

Ecology

The altitude and period during which the adults appear in Catalonia is unknown. Found at the beginning of the 20th century at a single unspecified location in El Baix Empordà.

Distribution

Iberian Peninsula.

Status

In regression. Found at a single unspecified location in El Baix Empordà. It could be an abundant species, judging by the number of specimens found in this location.

Bibliography

Aguirre & Pascual 1988; Barranco & Pascual 1993; Gangwere et al. 1985; Gómez et al. 1991; Harz 1969, p. 559; Herrera 1982, p. 29; Hernández et al. 1998; Martorell i Peña 1879; Pardo et al. 1991 and 1993; Ragge & Reynolds 1998, p. 246; Vahed 1997.

***Steropleurus panteli* (Navás, 1899)**

Presence

2 grid squares (0.5 %).

Description

Body: 23 to 26 mm. Lateral crests of pronotum marked on the metazona. Male cerci with an internal tooth as large as the end part. Ovipositor curved slightly upwards, shorter than the posterior femur. Subgenital plate in the female as wide as it is long, and square shaped.

Ecology

Present in: dry pine forest. Found above 358 m (Cabacés, Priorat, UTM: 31TCF16, MNCN coll.) up to 1020 m (La Morera del Montsant, Priorat, UTM: 31TCF27, J. Barat coll.). Adults present in August.

Distribution

Southern part of the Coastal mountain system (Montsant). Catalonia.

Status

In regression.

Bibliography

Gangwere et al. 1985; Harz 1969, p. 566; Herrera 1982, p. 30.

***Steropleurus ortegai* (Pantel, 1896)**

Presence

1 grid square (0.2 %).

Description

Body: 28 to 32 mm. Lateral crests of pronotum marked on the metazona. Male cerci with an internal tooth as large as the end part. Ovipositor approximately the same length as the posterior femur. Subgenital plate in the female slightly wider than it is long, and trapezoidal.

Ecology

Present in: dry thorny scrub. Found above 1230 m (La Sénia, Montsià, UTM:31TBF61, J. Barat coll.) up to 1420 m (Roquetes, Baix Ebre, UTM: 31TBF72, J. Barat coll.). Adults present in August.

Distribution

Southern tip of the Coastal mountain system (Ports de Tortosa-Beceit). Iberian Peninsula: Iberian System.

Status

Cited for the first time in Catalonia.

Bibliography

Gangwere et al. 1985; Harz 1969, p. 568; Herrera 1982, p. 29; Pardo et al. 1991 and 1993.

Uromenus rugosicollis (Serville, 1839)

Presence

30 grid squares (8.1 %).

Description

Body: 25 to 31 mm. Side carinae of the pronotum marked, particularly in the metazona. Short tegmina in both sexes. Long male cerci with an inner tooth in the middle. Tenth tergite of the male joined to the supragenital plate or supra-anal shield, which form a longer piece than the cerci, ending in a round lamina. Ovipositor relatively short and curved upwards. Subgenital plate in the female with two very long, pointed lobes (2 or 3 times longer than wide), separated.

Ecology

Present in: riverside woodland, siliceous rockrose scrub and heather, heath and brambles. Has been found above 17 m (Castelló d'Empuries, Alt Empordà, UTM: 31TEG07) up to 1250 m (Maçanet de Cabrenys, Alt Empordà, UTM: 31TDG79). Adults present from July to November.

Distribution

Empordà plains, Transversal mountain system and Coastal mountain system. France and Catalonia.

Status

Synonymy: *Ephippiger durieui*. Not very abundant species.

Bibliography

Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 164; Chopard 1951, p. 165; Defaut 1984 and 1999, p.21; Harz 1969, p. 576; Herrera 1982, p. 31; Martorell i Peña 1879; Morin 2000; Nadig 1994; Olmo-Vidal 2000 a and c; Peinado 1990; Ragge & Reynolds 1998, p. 240; Vahed 1997.

Platystolus monticola (Serville, 1839)

Presence

8 grid squares (2.1 %).

Description

Body: 26 to 35 mm. Short tegmina. Carinae of the pronotum very marked. Tenth tergite of the male with two diverging lobes with the anal shield situated in the middle, under the lobes. Cerci ending in a point with a tooth in the middle. Ovipositor twice as long as the pronotum and not very curved.

Ecology

Present in: Alpine and subalpine meadows. Lives from 1409 m (Lessui, Sort, Pallars Sobirà, 31TCH40) up to 2040 m (Montferrer i Castellbó, Alt Urgell, 31TCG59, J. Barat coll.). Adults present from July to September.

Distribution

Central Pyrenees and Pre-Pyrenees. Pyrenees.

Status

Synonymy: *Callicrania monticola*, *Platystolus ramburi*. Cited for the first time in Catalonia. Not very abundant species.

Bibliography

Alonso & Herrera 1982; Bailey & Rentz 1990; Chopard 1951, p. 168; Defaut 1978 and 1999, p.21; Gangwere et al. 1985; Harz 1969, p. 586; Herrera & Larumbe 1992; Herrera 1982, p. 32 and 1985; Pfau 1996; Pinedo & Llorente 1988; Vahed 1997.

***Platystolus obvius* (Navás, 1904)**

Presence

12 grid squares (3.2 %).

Description

Body: 25 to 30 mm. Lateral crests of pronotum highly marked on the metazona. Cerci of the male quadrangular with an inner tooth situated at the apex. Tenth tergite of the male with a mid projection. Short ovipositor, straight at the base and slightly curved upwards at the terminal part.

Ecology

Present in: box scrub. Found above 560 m (Organyà, Alt Urgell, 31TCG67, MZB coll.) up to 1900 m (Cabó, Alt Urgell, 31TCG47, J. Barat coll.). It coincides in some points with the distribution of *P. monticola*, however, in these grid squares *P. obvius* lives at a lower altitude. Adults present from July to September.

Distribution

Central Pre-Pyrenees. Iberian Peninsula.

Status

Synonymy: *Synephippus obvius*. Not very abundant species.

Bibliography

Alonso & Herrera 1982; Bailey & Rentz 1990; Codina 1924; Gangwere et al. 1985; Harz 1969, p. 598; Herrera & Larumbe 1992; Herrera 1982, p. 33 and 1985; Isern-Vallverdú & Pardo 1990; Pfau 1996.

***Pycnogaster sanchezgomezi* Bolívar, 1897**

Presence

2 grid squares (0.5 %).

Description

Body: 25 to 35 mm. Prosternum with two spine-like protuberances. Lateral carinae of the pronotum very marked. Tegmina very small, hidden under the pronotum. The seventh sternum of the female with a small tubercle. Long ovipositor.

Ecology

Present in: peak dry thorny scrub. Found above 1230 m (La Sénia, Montsià, UTM: 31TBF61, J. Barat pers. obs.) up to 1300 m (Tortosa, Baix Ebre, UTM: 31TBF72, J. Barat pers. obs.). Adults present from June to August.

Distribution

Southern tip of the Coastal mountain system (Ports de Beceit). the Iberian Peninsula: eastern part.

Status

Cited for the first time in Catalonia. Very rare species.

Bibliography

Bolívar 1926; Gangwere et al. 1985; Gómez et al. 1991; Harz 1969, p. 606; Herrera 1982, p. 34; Pardo et al. 1991, 1993 a and b; Pfau 1988; Pinedo & Llorente 1986; Pulido 1990; Ragge & Reynolds 1998, p. 255.

***Dolichopoda linderi* (Dufour, 1861)**

Presence

11 grid squares (2.9 %).

Status

Not very abundant species.

Description

Body: 16 to 18 mm. Without tegmina or wings (apterous). Very long legs and antennae. Femur without spines at the apex, which distinguishes it from *Dolichopoda bolivari*. The tenth tergite of the male has slightly prominent and rounded angles. Subgenital plate in the female has convex in the posterior margin. The ovipositor has 18 denticulations.

Ecology

Present in: caves. The altitudes have not been considered as this is a cave-dwelling species. Adults present throughout the year.

Distribution

Eastern Pyrenees and Transversal mountain system.

Bibliography

Bellmann & Luquet 1995, p. 165; Boudou-Saltet 1979; Chopard 1916, 1932 and 1951, p. 172 ; Defaut 1999, p.21; Escolà 1970 and 1983; Gangwere et al. 1985; Harz 1969, p. 634; Herrera 1982, p. 36; Leroy 1967; Morales-Agacino 1941a; Russo (di) 1991.

***Dolichopoda bolivari* Chopard, 1915**

Presence

16 grid squares (4.3 %).

Status

Not very abundant species.

Description

Body: 17 to 18 mm. Without tegmina or wings (apterous). Very long legs and antennae. Femur with spines at the apex, which distinguishes it from *Dolichopoda linderi*. Tenth tergite of the male has only slightly prominent, rounded angles. The ovipositor has between 23 and 25 denticulations.

Ecology

Present in: caves. The altitudes were not considered as this is a cave-dwelling species. Adults present throughout the year.

Distribution

Central Pre-Pyrenees.

Bibliography

Bellmann & Luquet 1995, p. 165; Chopard 1915, 1916 and 1951, p. 175; Defaut 1999, p.22; Escolà 1970; Gangwere et al. 1985; Harz 1969, p. 635; Herrera 1982, p. 36; Leroy 1967; Morales-Agacino 1941a; Russo (di) 1991

***Dolichopoda linderi* (Dufour, 1861)**

Presence

11 grid squares (2.9 %).

Status

Not very abundant species.

Description

Body: 16 to 18 mm. Without tegmina or wings (apterous). Very long legs and antennae. Femur without spines at the apex, which distinguishes it from *Dolichopoda bolivari*. The tenth tergite of the male has slightly prominent and rounded angles. Subgenital plate in the female has convex in the posterior margin. The ovipositor has 18 denticulations.

Ecology

Present in: caves. The altitudes have not been considered as this is a cave-dwelling species. Adults present throughout the year.

Distribution

Eastern Pyrenees and Transversal mountain system.

Bibliography

Bellmann & Luquet 1995, p. 165; Boudou-Saltet 1979; Chopard 1916, 1932 and 1951, p. 172 ; Defaut 1999, p.21; Escolà 1970 and 1983; Gangwere et al. 1985; Harz 1969, p. 634; Herrera 1982, p. 36; Leroy 1967; Morales-Agacino 1941a; Russo (di) 1991.

***Dolichopoda bolivari* Chopard, 1915**

Presence

16 grid squares (4.3 %).

Status

Not very abundant species.

Description

Body: 17 to 18 mm. Without tegmina or wings (apterous). Very long legs and antennae. Femur with spines at the apex, which distinguishes it from *Dolichopoda linderi*. Tenth tergite of the male has only slightly prominent, rounded angles. The ovipositor has between 23 and 25 denticulations.

Ecology

Present in: caves. The altitudes were not considered as this is a cave-dwelling species. Adults present throughout the year.

Distribution

Central Pre-Pyrenees.

Bibliography

Bellmann & Luquet 1995, p. 165; Chopard 1915, 1916 and 1951, p. 175; Defaut 1999, p.22; Escolà 1970; Gangwere et al. 1985; Harz 1969, p. 635; Herrera 1982, p. 36; Leroy 1967; Morales-Agacino 1941a; Russo (di) 1991

***Pteronemobius lineolatus* (Brullé, 1835)**

Presence

4 grid squares (1.0 %).

Description

Body: 7 to 11 mm. Head is brown with three darker, longitudinal lines. The tegmina reach two thirds of the length of the abdomen and have a paler margin up to the apex. Ovipositor toothed at the apex, shorter than the posterior femora.

Ecology

Present in: stony rivers. Has been found above 490 m (Hostaletts d'en Bas, Garrotxa, UTM: 31TDG56, MZB coll.) up to 1275 m (Setcases, Ripollès, UTM: 31TDG49, MZB coll.). Adults present in September.

Distribution

Eastern Pyrenees and Pre-Pyrenees. Southern Europe.

Status

Synonymy: *Nemobius lineolatus*. Not very abundant species.

Bibliography

Barranco & Pascual 1991 and 1993; Bellmann & Luquet 1995, p. 180; Chopard 1938 and 1951, p. 192; Defaut 1999, p.25; Fernandes 1959; Harz 1969, p. 716; Herrera 1982, p. 47; Martorell i Peña 1879; Pinedo & Llorente 1988.

***Pteronemobius heydenii* (Fischer, 1853)**

Presence

3 grid squares (0.8 %).

Description

Body: 6 to 7 mm. Generally very dark in colour, more so than *P. lineolatus*. The tegmina reach two thirds of the length of the abdomen and have a paler margin up to the apex. Ovipositor scarcely toothed at the apex, shorter than the posterior femora.

Ecology

Present in: stony rivers. Has been found above 142 m (Santa Coloma de Farners, Selva, UTM: 31TDG73) up to 966 m (Vallfogona de Ripollès, Ripollès, UTM: 31TDG37). Adults present from May to October.

Distribution

Pre-Pyrenees and north of the Coastal mountain system. Europe, North Africa and Asia.

Status

Synonymy: *Pteronemobius concolor* and *Nemobius heydenii*. Rare species.

Bibliography

Baccetti et al. 1995; Bellmann & Luquet 1995, p. 181; Chopard 1938, 1943, p. 240 and 1951, p. 191; Defaut 1999, p.24; Harz 1969, p. 716; Herrera 1982, p. 47; Herrera & Larumbe 1996; Martorell i Peña 1879; Nagy 1987; Naskrecki & Ůnal 1995; Pardo et al. 1991 and 1993; Ragge & Reynolds 1998, p. 274; Schmidt 1989; Szijj 1992;

***Nemobius sylvestris* (Bosc, 1792)**

Presence

36 grid squares (9.8 %).

Description

Body: 9 to 10 mm. The head has a white inverted "Y"-shaped line. The tegmina reach the middle of the abdomen in males and in females are even shorter. Spines on the mobile posterior tibiae. Straight ovipositor, slightly longer than the posterior femora.

Ecology

Present in: deciduous forest, evergreen forest and box scrub. Found amongst dead leaves. Found above 247 m (Canyamars, Dosrius, Maresme. UTM: 31TDG50) up to 2100 m (Coll de Pal, La Molina, Baixa Cerdanya, UTM: 31TDG18, UB coll.). Very abundant in pitfall traps. Adults present almost all year round, from March to December.

Distribution

Pyrenees, Pre-Pyrenees, Transversal mountain system, central high plateaux and basins and Coastal mountain system. Europe and North Africa.

Status

Abundant species.

Bibliography

Alonso & Herrera 1982; Baccetti 1963; Bellmann & Luquet 1995, p. 178; Burgos & Herrera 1986; Chopard 1938, 1943, p. 238, 1951, p. 189; Defaut 1999, p. 24; Dreux 1961; Gangwere & Llorente 1992; Haes & Harding 1997; Harz 1969, p. 715; Herrera 1982, p. 47 and 1985; Herrera & Larumbe 1996; Marshall & Haes 1988; Martorell i Peña 1879; Morales-Agacino 1956; Pardo et al. 1991 and 1993; Pinedo & Llorente 1988; Preston-Mafham 1990; Rague & Reynolds 1998, p. 272; Thorens 1984 and 1986 a.

Mogolistes brunneus* Serville, 1839*Presence**

1 grid square (0.2 %).

Description

Body: 6.5 a 8 mm. General colouring black. Body covered in small scales that come off on contact. Head with a projection between the antennae. The tegmina are reduced to small scales hidden under the pronotum which gives it an apterous look (without tegmina or wings). Posterior tibiae saw shaped, but without differentiated spines. Compressed ovipositor ending in a point.

Ecology

Present in: evergreen sclerophyllous forest (holm-oak wood). Lives under stones and was captured in the pitfall trap. Found in a single location at 122 m (Sant Just Desvern, Barcelonès, UTM: 31TDF28, V. Bonet coll.).

Distribution

Central part of the Coastal mountain system (Collserola). Mediterranean Europe and North Africa.

Status

Rare species.

Bibliography

Bellmann & Luquet 1995, p. 183; Chopard 1951, p. 194; Defaut 1999, p.25; Fernandes 1959; Gangwere & Llorente 1992; Harz 1969, p. 721; Herrera 1982, p. 48; Massa 1998; Schmidt 1989;

Archnocephalus vestitus* Costa, 1855*Presence**

16 grid squares (4.3 %).

Description

Body: 6 to 9 mm. General brown colour. Body covered in small scales that come off on contact. Head with a projection between the antennae divided by a longitudinal incision. Posterior tibiae saw shaped, but without differentiated spines. Straight ovipositor.

Ecology

Present in: maquis, calcicolous rosemary scrub, siliceous rockrose scrub and heath and savannah-type meadow.

Has been found above 4 m (Platja de la Gola, Torroella de Montgrí, UTM: 31TEG15, J. Muñoz coll.) up to 980 m (Camprodon, Ripollès, UTM: 31TDG48). Adults present from August to September.

Distribution

Eastern Pre-Pyrenees, Empordà plains, central high plateaux and basins, coastal mountain system and coastal area. Southern Europe and North Africa.

Status

Very rare species.

Bibliography

Baccetti et al. 1995; Badih et al. 1997; Bellmann & Luquet 1995, p. 182; Chopard 1938, 1943, p. 235, 1951, p. 195; Defaut 1999, p. 25; Fernandes 1959; Gangwere & Llorente 1992; Gómez et al. 1991; Harz 1969, p. 720; Herrera 1982, p. 49; Llorente 1980; Olmo-Vidal 2001 a; Pardo et al. 1991; Schmidt 1989; Uvarov 1934.

Myrmecophilus acervorum* (Panzer, 1799)*Presence**

2 grid squares (0.5 %).

Description

Body: 2.5 to 3 mm. This is the smallest orthopteran known in Catalonia. Oval body. The eyes are very small and are vestigial. Does not have tegmina or wings. The cerci are long and thick. Short ovipositor.

Ecology

The type of environment is unknown. Lives in ants nests, and is an ant-loving species. According to Xavier Espadaler, has been observed with at least two ants: *Lasius grandis* and *Messor structor* (Latreille). The first lives on nectar and the second on grain.

Distribution

Central part of the Coastal mountain system. Europe.

Status

Cited for the first time in Catalonia. In regression. Very rare species.

Bibliography

Bellmann & Luquet 1995, p. 185; Chopard 1938, 1943, p. 236 and 1951, p. 196; Defaut 1999, p. 26; Gangwere & Llorente 1992; Harz 1969, p. 725; Herrera 1982, p. 50; Morales-Agacino 1956; Nagy 1987.

Trigonidium cicindeloides* Rambur, 1839*Presence**

6 grid squares (1.6 %).

Description

Body: 4.5 to 5 mm. General colouring black with the posterior femora and tibiae reddish. Maxillary palpi with the fifth article large and triangular. Slightly curved ovipositor.

Ecology

Present in: riverside grassland, reed bed and rushes. Lives on vegetation near irrigation ditches, also near ponds. Found above 6 m (Prat de Llobregat, Baix Llobregat, UTM:31TDF27) up to 110 m (La Rierada, Molins de Rei, UTM: 31TDF18). Adults present from May to November.

Distribution

Central and southern parts of the coastal mountain system and coastal area. Southern Europe, Africa and Asia.

Status

Rare species.

Bibliography

Aguirre & Pascual 1988; Baccetti et al. 1995; Barranco & Pascual 1993; Bland et al. 1996; Chopard 1938, 1943, p. 242 and 1951, p. 198; Cuní i Martorell 1887; Defaut 1999, p.26; Fernandes 1959; Gangwere & Llorente 1992; Harz 1969, p. 732; Herrera 1982, p. 50; Llorente 1980; Lock 1999; Martorell i Peña 1879; Massa 1998; Morales-Agacino 1956; Naskrecki & Ünal 1995; Olmo 1990; Olmo-Vidal 2000 a; Pinedo & Llorente 1987; Uvarov 1948.

Oecanthus pellucens* (Scopoli, 1763)*Presence**

43 grid squares (11.7 %).

Description

Body: 9 to 15 mm. Always pale brown. Oval eyes. not very protruding, without ocellus. Pronotum longer than it is wide, with small lateral lobes. Elongated brown body and head. Well-developed wings and tegmina. The wings in repose extend beyond the length of the tegmina. Front tibiae raised with a large, oval tympanum. Posterior femora slightly swollen at the base. The cerci are parallel and the same length as the ovipositor, which is straight.

Ecology

Present in: calcicolous rosemary scrub, siliceous rockrose scrub and heath, thicket, brambles, false brome, savannah-type meadow and cultivated land, fallow and cereal field margin. Found above 17 m (Castell d'Empúries, Alt Empordà, UTM: 31TEG07) up to 954 m (Castell de l'Areny, Berguedà, UTM: 31TDG17). Adults present from June to October.

Distribution

Pre-Pyrenees, Empordà plains, Transversal mountain system, central high plateaux and basins, Central depression, Coastal mountain system and Coastal area. Southern Europe and North Africa.

Status

Rare species.

Bibliography

Aguirre & Pascual 1988; Alonso & Herrera 1982; Arcos & Pascual 1988; Baccetti 1963; Baccetti et al. 1995; Badih et al. 1997; Barranco & Pascual 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 184; Bland et al. 1996; Burgos & Herrera 1986; Chopard 1938, 1943, p. 243, 1951, p. 199; Cuní i Martorell 1887; Defaut 1999, p.26; Desutter-Grandcolas 1995; Dreux 1961; Eiroa & Novoa 1987; Gangwere & Llorente 1992; Gangwere & Spiller 1995; Gómez et al. 1991; Harz 1969, p. 733; Herrera 1982, p. 51 and 1985; Herrera & Larumbe 1996; Hernández et al. 1998; Isern-Vallverdú & Pardo 1990; Llorente 1980; Martorell i Peña 1879; Massa 1998; Morales-Agacino 1956; Nagy 1987; Naskrecki & Ünal 1995; Olmo 1990; Olmo-Vidal 2000 a, c and 2001 a; Olmo-Vidal & Llimona 2000; Pardo et al. 1990, 1991 and 1993 a, b; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Ragge & Reynolds 1998, p. 274; Schmidt 1989; Toms & Otte 1988; Ünal 2000; Uvarov 1934.

Gryllotalpa gryllotalpa* (Linnaeus, 1758)*Presence**

13 grid squares (3.5 %).

Description

Body: 40 to 50 mm. Head looking forwards. Fairly short antennae. Large pronotum, with round side carinae, covered in pubescence. Short, thick front legs, transformed for digging with the posterior femora

not adapted for jumping. The nerves of the elytra are very similar in both sexes. The female does not have the typical elongated ovipositor of the Ensifera.

Ecology

Present in: damp meadow in the Empordà plain, dunes, reed bed, rushes, cultivated land (vines and fruit orchards) and river grassland. Lives underground. Occasionally comes out, when the galleries in which it lives flood. When the males sing, they stand at the entrance to the gallery with the tip of their abdomen facing out. Found above 10 m (Sant Carles de la Ràpita, Montsià, UTM: 31TBE99) up to 980 m (Vilaller, Alta Ribagorça, UTM: 31TCH10, J. Muñoz coll.). Adults present from April to July.

Distribution

Pre-Pyrenees, Empordà plains, Central depression, Coastal mountain system and Coastal area. Southern Europe and North Africa. Species introduced to the United States.

Status

Synonymy: *Gryllotalpa vulgaris*. Rare species.

Bibliography

Aguirre et al. 1987; Alonso & Herrera 1982; Badih et al. 1997; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 186; Burgos & Herrera 1986; Chopard 1938, 1943, p. 174 and 1951, p. 201; Cuní i Martorell 1887; Defaut 1999, p.26; Eiroa & Novoa 1987; Gangwere & Llorente 1992; Gómez et al. 1991; Haes & Harding 1997; Harz 1969, p. 737; Herrera 1982, p. 52 and 1985; Herrera & Larumbe 1996; Llorente 1980; Lock 1999; Marshall & Haes 1988; Martorell i Peña 1879; Morales-Agacino 1956; Nagy 1983; Olmo 1990; Pardo et al. 1990, 1991, 1993 a and b; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Preston-Mafham 1990; Ragge & Reynolds 1998, p. 276; Schmidt 1989; Uvarov 1948.

***Xya variegata* (Latreille, 1809)**

Presence

5 grid squares (1.3 %).

Description

Body: 5 a 5.5 mm. Front and middle tarsi with two segments and the posterior tarsi with one. Posterior femora oval. Antennae proportionally short. Pronotum rounded on the lateral margins. Without ovipositor.

Ecology

Present in: dunes and stony rivers. Found above 6 m (Prat de Llobregat, Baix Llobregat, UTM: 31TDF27) up to 1000 m (Lavansa, La Vansa i Fòrnols, Alt Urgell, UTM: 31TCG77, MZB coll.). Adults present from May to October.

Distribution

Pre-Pyrenees and Coastal area Southern Europe, North Africa and Asia.

Status

In regression. Synonyms: *Tridactylus variegatus*. Rare species.

Bibliography

Bellmann & Luquet 1995, p. 188; Badih & Pascual 1998; Blackith. & Blackith 1979; Chopard 1938, 1943, p. 244 and 1951, p. 202; Defaut 1999, p. 29; Gangwere & Llorente 1992; Günther 1979, 1980, 1990 and 1995; Harz 1975, p. 55; Herrera 1982, p.53; Llorente 1980; Massa 1998; Naskrecki & Ünal 1995; Olmo 1990; Szijj 1992; Uvarov 1934 and 1948.

***Paratettix meridionalis* (Rambur, 1829)**

Presence

44 grid squares (12.0 %).

Description

Body: 7 to 12 mm. In dorsal view, the vertex is narrower than the width of an eye and does not protrude in front of the eyes. In the rest of the Tetrigid species in Catalonia it is always wider. Elongated pronotum exceeding the apex of the posterior femora. Median carina of the pronotum not very raised along its length, does not reach the anterior edge. Lower edge of the front and mid femurs wavy.

Ecology

Present in : stony rivers and river grassland. Found above 6 m (El Prat de Llobregat, Baix Llobregat, UTM: 31TDF27) up to 624 m (Sant Pere de Torelló, Osona, UTM: 31TDG45). Adults present from March to October.

Distribution

Central Pre-Pyrenees, Empordà plains, Transversal mountain system, Central depression, Coastal mountain system and Coastal area. Southern Europe, North Africa and Asia.

Status

Synonymy: *Tettix meridionalis*. Not very abundant species.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Alonso & Herrera 1982; Arcos & Pascual 1988; Baccetti et al. 1995; Badih & Pascual 1998; Barranco & Pascual 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 190; Bland et al. 1996; Bolívar 1876; Burgos & Herrera 1986; Chopard 1938, 1943, p. 248 and 1951, p. 212; Cuní i Martorell 1887; Defaut 1999, p. 27 ; Gangwere & Llorente 1992 ; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 22; Herrera 1982, p. 54 and 1985; Herrera-Mesa 1978; Karaman 1965; Llorente 1980; Llorente & Presa 1981; Lock 1999; Martorell i Peña 1879; Massa 1998; Naskrecki & Únal 1995; Olmo 1990; Pardo 1993 b; Pardo et al. 1990 and 1991; Pascual 1978 a, b, c and d; Pinedo & Llorente 1987; Schmidt 1989; Uvarov 1934.

***Tettix subulata* (Linnaeus, 1761)**

Presence

10 grid squares (2.7 %).

Description

Body: 11.5 to 12 mm. Middle segments of the antennae broad, approximately half their length. Elongated pronotum extending beyond the apex of the posterior femora. In lateral view, the vertex forms a right angle with the pronotum. In dorsal view, the vertex is wider than the width of an eye and protrudes in front of the eyes at an obtuse angle. Median carina of the vertex does not exceed the anterior edge.

Ecology

Present in: stony rivers and river grassland. Found above 526 m (Centelles, Osona, UTM: 31TDG32) up to 1136 m (Planoles, Ripollès, UTM: 31TDG28). Adults present from June to September.

Distribution

Pyrenees, Pre-Pyrenees and Transversal mountain system. Europe.

Status

Rare species.

Bibliography

Baccetti 1963; Bellmann & Luquet 1995, p. 192; Bolívar 1876; Chopard 1951, p. 84; Cuní i Martorell 1887; Defaut 1999, p. 27; Haes & Harding 1997; Harz 1975, p. 23; Herrera 1982, p. 55; Herrera & Larumbe 1996; Karaman 1965;

Llorente & Presa 1981; Marshall & Haes 1988; Martorell i Peña 1879; Nagy 1983 and 1987; Naskrecki & Ünal 1995; Schmidt 1989; Ünal 2000.

***Tetrix ceperoi* (Bolívar, 1887)**

Presence

4 grid squares (1.1 %).

Description

Body: 10.5 a 11.5 mm. Concave forehead. Elongated pronotum, extending beyond the apex of the posterior femora. Dorsal carina of the pronotum slightly curved behind the head and raised. In dorsal view, the vertex is approximately the same width as the width of an eye and the median carina of the vertex protrudes from the anterior edge.

Ecology

Present in: stony rivers and river grassland. Found in a single location at 1422 m (Cabdella, La Torre de Cabdella, Pallars Sobirà, UTM: 31TCH30). Adults present in May.

Distribution

Central Pyrenees. Europe.

Status

Very rare species. In regression.

Bibliography

Alonso & Herrera 1982; Barranco & Pascual 1991 and 1993; Baur et al. 1996; Bellmann & Luquet 1995, p. 191; Bolívar 1887; Chopard 1943, p. 248 and 1951, p. 216; Defaut 1999, p. 27; Haes & Harding 1997; Harz 1975, p. 27; Herrera 1982, p. 55 and 1985; Herrera & Larumbe 1996; Karaman 1965; Llorente 1980; Llorente & Presa 1981; Marshall & Haes 1988; Pardo et al. 1991; Pinedo & Llorente 1988; Schmidt 1989.

***Tetrix bolivari* (Saulcy, 1901)**

Presence

3 grid squares (0.8 %).

Description

Body: 10.5 to 13.8 mm. Elongated pronotum extending beyond the apex of the posterior femora. In dorsal view, the vertex is wider than an eye and its front tip is found at the same level as the eyes. In lateral view, the median carina of the pronotum protrudes very slightly and in the metazona is lower than lateral carinae. Lower margin of the mid femur very slightly wavy.

Ecology

Present in: river grassland. Found in a single location at 5 m (Sant Pere Pescador, Alt Empordà, UTM: 31TEG07).

Distribution

Europe and Asia.

Status

Very rare species. In regression.

Bibliography

Arcos & Pascual 1988; Beiro et al. 1998; Chopard 1951, p. 217; Defaut 1999, p. 27; Harz 1975, p. 27; Herrera 1982, p. 55; Karaman 1965; Llorente & Presa 1981; Pardo et al. 1991; Szijj 1992.

***Tetrix undulata* (Sowerby, 1806)**

Presence

11 grid squares (3.0 %).

Description

Body: 8 to 12 mm. Segments of the antennae with parallel edges, like small cylinders. Pronotum without extending beyond or just reaching the apex of the posterior femora. In dorsal view, the vertex forms an obtuse angle and the median carina does not extend beyond the margin. The margin of the wings is continuous and not lobed, a feature that distinguishes it from *Tetrix nutans* in which the margin of the wings is lobed.

Ecology

Present in: riverside grassland, stony rivers and rushes. Found above 6 m (Prat de Llobregat, Baix Llobregat, UTM: 31TDF27) up to 871 m (Moror, Sant Esteve de la Sarga, Pallars Jussà, UTM: 31TCG26, J. Martí coll.). Adults present from April to September.

Distribution

Central Pre-Pyrenees, coastal mountain system and coastal area. Europe.

Status

Synonyms: *Tetrix vittata*. Rare species.

Bibliography

Arcos & Pascual 1988; Bellmann & Luquet 1995, p. 196; Chopard 1951, p. 220; Defaut 1999, p. 28; Dreux 1961; Gómez-Ladrón de Guevara et al. 1992; Haes & Harding 1997; Harz 1975, p. 32; Herrera 1982, p. 56 and 1985; Herrera-Mesa 1978; Herrera & Larumbe 1996; Llorente & Presa 1981; Marshall & Haes 1988; Olmo 1990; Pardo et al. 1991; Pinedo & Llorente 1988; Poras 1976 and 1979.

***Tetrix nutans* (Hagenbach, 1822)**

Presence

11 grid squares (3.0 %).

Description

Body: 9.5 to 10 mm. In dorsal view, the vertex has a straight margin with the median carina protruding. Pronotum without extending beyond or just reaching the apex of the posterior femora. The margin of the wings is lobed, a feature that distinguishes it from *Tetrix undulata* in which the wing margin is continuous. The length of the posterior femora is less than three times its width.

Ecology

Present in: willow groves and stony rivers. Found above 595 m (La Farga de Bebié, Montesquiu, Ripollès, UTM:31TDG36) up to 1422 m (Cabdella, Pallars Sobirà, UTM: 31TCH30). Adults present from June to September.

Distribution

Pyrenees and Transversal mountain system. Europe and North Africa

Status

Synonymy: *Tetrix tenuicornis*. Rare species.

Bibliography

Bellmann & Luquet 1995, p. 197; Chopard 1951, p. 218; Dreux 1961; Harz 1975, p. 36; Herrera & Larumbe 1996; Herrera 1982, p. 56; Karaman 1965; Llorente & Presa 1981; Nagy 1983 and 1987; Thorens 1984 and 1986 a.

***Tetrix depressa* (Brisout, 1848)**

Presence

20 grid squares (5.4 %).

Description

Body: 7 to 11 mm. Elongated pronotum extending beyond the apex of the posterior femora. In lateral view, the median carina of the pronotum has a sunken area at the level of the tegmina. Lower margin of the mid femurs wavy.

Ecology

Present in: dune and stony rivers and river grassland. Found above 30 m (Santa Cristina d'Aro, Baix Empordà, UTM: 31TDG92, J. Martí coll.) up to 1500 m (Bonabé, Alt Àneu, Pallars Sobirà, UTM: 31TCH43). It probably hibernates as an adult. Adults present from March to October.

Distribution

Pyrenees, Pre-Pyrenees, Transversal mountain system and coastal mountain system. Europe, North Africa and Asia.

Status

Rare species. Synonymy: *Depressotetrix depressa*.

Bibliography

Alonso & Herrera 1982; Arcos & Pascual 1988; Baccetti 1963; Barranco & Pascual 1991 and 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 195; Bolívar 1876; Chopard 1943, p. 246 and 1951, p. 215; Defaut 1999, p. 29; Dreux 1961; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 31; Herrera 1982, p. 57 and 1985; Herrera-Mesa 1978; Karaman 1965; Llorente & Presa 1981; Pardo et al. 1991; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Schmidt 1989; Uvarov 1934.

***Pyrgomorpha conica* (Olivier, 1791)**

Presence

35 grid squares (9.5 %).

Description

Body: 15 to 30 mm. Brown or green. Conical head, with the vertex elongated. Antennae short and widened at the base. Prosternum with a tubercle widening at the front. Tegmina extending beyond the knees of the posterior femora when in repose. The wings are occasionally pink at the base.

Ecology

Present in: dry pine forest, calcicolous rosemary scrub, siliceous rockrose scrub and heath, thyme bushes, false brome, small meadow, continental wilderness and coastal dune. Found above 4 m (El Muntanyans, Torredembarra, Tarragonès, UTM: 31TCF65) up to 591 m (Gerri de la Sal, Baix Pallars, Pallars Sobirà, UTM: 31TCG48). They hibernate as nymphs. Adults present from April to July.

Distribution

Central Pre-Pyrenees, central high plateaux and basins. Central Depression, coastal mountain system and coastal area. Southern Europe, North Africa and East Asia. It is the only European species of this tropical family.

Status

Synonymy: *Pyrgomorpha rosea*. Rare species. The nymphs of the first phase may occasionally be abundant.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Alonso & Herrera 1982; Arcos & Pascual 1988; Baccetti et al. 1995; Badih et al. 1997; Barranco & Pascual 1993; Bellmann & Luquet 1995, p. 201; Bland et al. 1996; Burgos & Herrera 1986; Chopard 1938, 1943, p. 338 and 1951, p. 222; Clemente et al. 1985; Defaut 1999, p. 30; Descamps 1970; Gangwere & Llorente 1992; García & Presa 1981; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 202; Herrera 1982, p. 58 and 1985; Kevan 1988; Llorente 1980; Lock 1999;

Martorell i Peña 1879; Massa 1994 and 1998; Mestre 1988; Olmo 1990; Olmo-Vidal 2000 c; Pardo et al. 1990, 1991 and 1993; Pascual 1975; Ponel & Hebrard 1988; Presa & Monserrat 1978; Presa et al. 1999; Uvarov 1934.

***Prionotropis flexuosa* (Serville, 1838)**

Presence

1 grid square (0.2 %).

Description

Body: 24 to 36 mm. Broad vertex, approximately the same width as length, concave and full of tubercles. Pronotum very wrinkled. Median carina high, with the typical deep furrow. Mid tibiae with a row of teeth or tubercles on the upper part. It is the only Iberian species of the pamphagidae family in which the male has the elytra well developed. In the females the tegmina and wings are very short, reaching approximately the second abdominal tergite. Abdomen with the median carina raised, with a tooth on each tergite. Short ovipositor valves, becoming suddenly narrower at the apex.

Ecology

Present in: thyme bushes (Alfès thyme bushes). Found in a single location at 214 m (Timoneda d'Alfès, Alfès, Segrià, UTM: 31TCG00). Adults present in May.

Distribution

Central depression. Iberian Peninsula.

Status

Cited for the first time in Catalonia. A species very close to *Prionotropis rhodanica*, it is legally protected in France. Rare species.

Bibliography

Chopard 1938; Foucart & Lecoq 1998; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 175; Herrera 1982, p. 58; La Greca 1999; Olmo-Vidal 2001 b; Pardo et al. 1991 and 1993 b; Presa & García 1983; Presa & Llorente 1982 and 1997; Presa et al. 1999; Pulido 1990.

***Acinipe* sp.**

Presence

2 grid squares (0.5 %).

Description

Body: 31 to 49 mm. Head with a protruding forehead, seen in profile. Median carina of the pronotum not furrowed and convex in lateral view. Lobiform tegmina, with rounded apex and the lower margin straighter than the upper one. Ventral valves of the ovipositor becoming gradually narrower up to the apex, seen from underneath, and with a marked transversal carina, slightly oblique.

Ecology

Present in: calcicolous rosemary scrub. Found above 430 m (La Juncosa de Montmell, El Montmell, Baix Penedès, UTM: 31TCF77) up to 475 m (Cal Llenç, Orpí, Anoia, UTM: 31TCF89). Adults present from July to August.

Distribution

Central high plateaux, and basins. Endemic to Catalonia.

Status

Its systematic position has still not been resolved. It would seem to be a species not described up until now, very close to *Acinipe segurensis* and *Acinipe deceptoris*. In regression.

Bibliography

Biondi & Massa, 1995; Gangwere et al. 1985; Gómez-Ladrón de Guevara et al. 1992; Herrera 1982, p. 6; La Greca 1999; Llorente & Presa 1997; Presa & García 1983; Presa & Llorente 1982.

***Kurtharzia nugatoria* (Navás, 1909)**

Presence

5 grid squares (1.3 %).

Description

Body: 25 to 60 mm. Tegmina of a uniform colour, very narrow at the base. Median carina of the pronotum longitudinally furrowed, convex in lateral view, and with the typical furrow at the rear. Lateral furrow of the pronotum very marked. Ventral valves of the ovipositor with the lateral external margin angled and suddenly narrowing at the apex in ventral view. These valves also have a well-marked transversal carina.

Ecology

Present in: dry thorny scrub and box scrub. Found above 337 m (Alfara de Carles, Baix Ebre, UTM: 31TBF82, X. Vázquez coll.) up to 1300 m (Mola del Boix, Tortosa, UTM: 31TBF71). Adults present from June to September.

Distribution

Southern tip of the Coastal mountain system (Ports de Beceit). Endemic to Iberia. Mountainous areas of the eastern Iberian system.

Status

Synonymy: *Navasius nugatorius*. Rare species.

Bibliography

Gangwere et al. 1985; Harz 1975, p. 126; Herrera 1982, p. 63; La Greca 1999; Llorente & Presa 1997; Presa & Garcia 1983; Presa et al. 2000.

***Ocnerodes brunneri* (Bolívar, 1876)**

Presence

22 grid squares (6.0 %).

Description

Body: 26 to 59 mm. Posternal tubercle (typical of the family) smooth, without carinae. Concave vertex approximately as wide as long. Median carina of the pronotum furrowed. Posterior femora with the dorsal and ventral carina very lobed. In the male, the tegmina reach the second abdominal tergite and in the female do not reach as far as the posterior margin of the first tergite. Opening of the tympanum almost trapezoidal. Abdomen with the upper median carina marked, raised at the posterior part of the tergites.

Ecology

Present in: calcicolous rosemary scrub, thicket and dry field of false brome. Found above 16 m (Cubelles, Garraf, UTM: 31TCF86, J. Muñoz coll.) up to 823 m (Pinós, Solsonès, UTM: 31TCG73, J. Barat coll.). The nymphs hibernate. Adults present from May to August.

Distribution

Central high plateaux and basins, Central Depression and central part of the coastal mountain system. Iberian Peninsula.

Status

Not very abundant species.

Bibliography

Gangwere et al. 1985; Harz 1975, p. 139; Hernández et al. 1998; Herrera 1982, p. 63; La Greca 1999; Llorente & Presa 1983 and 1997; Navás 1910; Olmo-Vidal 2000 b and c; Pardo et al. 1991 and 1993 b; Presa & Garcia 1983; Presa et al. 1999.

Anacridium aegyptium (Linnaeus, 1764)

Presence

47 grid squares (12.8 %).

Description

Body: 32 to 66 mm. Adults are a greyish-brown with an orange line at the dorsal median carina of the pronotum. Pronotum with three well-marked furrows and with the lateral carinae hardly visible. Under the pronotum there is a conical prosternum tubercle, characteristic of the Catantopidae family to which this species belongs. Dark wings. Subgenital plate of the male elongated with three lobes at the apex.

Ecology

Present in: Mediterranean pine forest, maquis, calcicolous rosemary scrub, siliceous rockrose scrub and heath, thicket, brambles, jonquil meadows, all kinds of dry or semi-damp meadows, river and coastal dune, stony rivers, cultivated land, riverside grassland, fallow and cereal field margin, gardens and urban areas. Found above 3 m (La Tancada, Sant Jaume d'Enveja, Montsià, UTM: 31TCF00) up to 871 m (Moror, Sant Esteve de la Sarga, Pallars Jussà, UTM: 31TCG26, J. Martí coll.). Found in cities during the winter. Adults present from September to May of the following year (the adults hibernate).

Status

Rare species.

Distribution

Central Pre-Pyrenees, Empordà plains, central high plateaux and basins, Central depression, coastal mountain system and coastal area. Southern Europe, North Africa and Asia.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Baccetti et al. 1995; Badih & Pascual 1998; Badih et al. 1997; Barranco & Pascual 1993; Bellmann & Luquet 1995, p. 228; Bland et al. 1996; Chopard 1938, 1943, p. 395 and 1951, p. 228; Clemente et al. 1985; Cuní i Martorell 1887; Defaut 1999, p. 33; Dirsh & Uvarov 1953; Gangwere & Llorente 1992; Gangwere & Spiller 1995; García & Presa 1981; García et al. 1984; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 392; Herrera 1982, p. 66 and 1985; Llorente 1980; Lock 1999; Martorell i Peña 1879; Massa 1998; Naskrecki & Ünal 1995; Olmo 1990; Olmo-Vidal 1997 b, 2000 a and c; Olmo-Vidal & Llimona 2000; Pardo et al. 1990 and 1993 b; Pascual 1975, 1978 a, b, c and d; Pinedo & Llorente 1987 and 1988; Presa & Monserrat 1978; Presa et al. 1999; Rezbanyai-Reser 1993; Schmidt 1989; Ünal 2000.

Schistocerca gregaria (Forsk., 1775)

Presence

1 grid square (0.2 %).

Description

Body: 60 to 90 mm. Variable colouring, mostly blackish-brown. Pronotum compressed in the prozona with the upper margin angled. Posternal tubercle rounded, slightly tilted backwards. Tegmina and wings long, extending beyond the tip of the abdomen and posterior knees in repose. Cerci of the males short. Subgenital plate with an incision, forming two lobes, in lateral view.

Ecology

Present in: coastal rushes. Found in a single location at 6 m (El Prat de Llobregat, Baix Llobregat, UTM: 31DF27). Presence of the only adult detected in October. Morales-Agacino mentions this species as accidental in Catalunya. According to the author, specimens arrive from Africa in groups transported by air currents.

Distribution

Coastal area.

Status

Very rare species.

Bibliography

Bland et al. 1996; Chapman & Joern 1990; Chopard 1938 and 1943, p. 397; Defaut 1999, p. 33; Descamps 1970; Farrow & Longstaff 1986; Gangwere & Llorente 1992; Gangwere et al. 1985; Harz 1975, p. 398; Herrera 1982, p. 67; Massa 1998; Mestre 1988; Naskrecki & Ünal 1995; Olmo 1990; Preston-Mafham 1990; Yerushalmi et al. 2000.

Pezotettix giornae* (Rossi, 1794)*Presence**

46 grid squares (12.5 %).

Description

Body: 11 to 18 mm. Pronotum with the lateral lobes always darker than the upper disc, with the lateral carinae slightly diverging. Posternal tubercle square. Upper part of disc with three furrows: two in the prozona and the typical furrow. Metazona approximately half the length of the prozona. Oval elytra in the shape of lobes, very short in both sexes, only reaching the third abdominal tergite, without touching the upper part. Posterior femora with two brown stripes. The ovipositor has long valves.

Ecology

Present in: calcicolous rosemary scrub, siliceous rockrose scrub and heath, thicket, brambles, jonquil meadows, false brome, savannah-type meadow, cultivated land and riverside grassland. Found above 56 m (Meda Gran, Illes Medes, Torroella de Montgrí, Baix Empordà, UTM: 31TEG15) up to 950 m (Coll de Montllobar, Tremp, Pallars Jussà, UTM: 31TCG16). Adults present from June to November. It is common to find specimens copulating, due to the long duration of the copulation in this species. During a biopelaeology campaign, O. Escolà found a specimen in an abyss (Avenc Sr. Jaume Mata in the Serra de l'Obac, UTM: 31TDG11. MZB coll.).

Distribution

Empordà plains, Transversal mountain system, central high plateaux and basins, coastal mountain system and coastal area. Central and Southern Europe, North Africa and Asia.

Status

Not very abundant species.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Arcos & Pascual 1988; Baccetti 1963; Badih & Pascual 1998; Barranco & Pascual 1993; Bellmann & Luquet 1995, p. 218; Chopard 1938, 1943, p. 389 and 1951, p. 227; Defaut 1999, p. 31; Foucart 1997; Gangwere & Llorente 1992; Garcia et al. 1984; Gómez-Ladrón de Guevara et al. 1992; González-García 1987; Harz 1975, p. 324; Hernández et al. 1998; Herrera 1982, p. 68; Köhler et al. 2000; Llorente 1980; Lock 1999; Nagy 1987; Olmo 1990; Olmo-Vidal 2000 a and c; Olmo-Vidal & Llimona 2000; Pardo et al. 1991 and 1993 b; Pascual 1978 a, b, c and d; Presa & Monserrat 1978; Presa et al. 1983 and 1999; Pulido 1990; Schmidt 1989; Ünal 2000.

Podisma pedestris* (Linnaeus, 1758)*Status**

Extinct in Germany.

Presence

11 grid squares (3.0 %).

Description

Body: 15 to 30 mm. Very short elytra in the form of small lobes, which reach no further than the posterior margin of the second abdominal tergite. Pronotum very flat at the upper part and with the posterior margin rounded. Posterior femora with two blackish-brown stripes and the lower part reddish. Posterior tibiae bluish. Subgenital plate of the male conical and short. Valves of ovipositor short with the lower ones toothed.

Ecology

Present in: Alpine and subalpine meadows and juniper thicket. Found above 1600 m (Salt del Pish. Pont de Varradòs, Vielha e Mijaran, UTM: 31TCH23, J. Muñoz coll.) up to 2200 m (Llac de Monastero, Espot, Pallars Sobirà, UTM: 31TCH31, J. Barat coll.). Adults present from July to October.

Distribution

Central Pyrenees. Central and Southern Europe.

Bibliography

Baccetti 1954 and 1963; Bellmann & Luquet 1995, p. 206; Burgos & Herrera 1986; Chopard 1938 and 1951, p. 232; Clemente et al. 1990 b; Defaut 1999, p. 30; Dreux 1961; Harz 1975, p. 233; Herrera 1982, p. 69; Hewitt 1990; Ingrisch 1995 b and 1996; Isern-Vallverdú & Pardo 1990; La Greca 1985; López-Fernández et al. 1984; Martorell i Peña 1879; Marty 1961; Mason et al. 1995; Morales-Agacino 1950; Mossot & Ewald 1994; Preston-Mafham 1990.

Miramella alpina* (Kollar, 1833)*Presence**

3 grid squares (0.8 %).

Description

Body: 16 to 31 mm. Very bright green with a black stripe on either side of the pronotum. Pronotum smooth in the prozona and slightly wrinkled in the metazona. Posterior femora with the lower margin red. The male has reddish posterior tibiae at the base and yellow at the apex. In the female, the posterior tibiae are completely yellow. Prosternum tubercle conical. Elytra very short, lateral, without extending beyond the second abdominal tergite. Subgenital plate of the male long and ending in a point. Valves of the ovipositor long and the lower ones not toothed.

Ecology

Present in: grassy margins of damp woodland. Found above 1035 m (Sant Joan de Toran, Canejan, Val d'Aran, UTM: 31TCH24) up to 1600 m (Salt del Pish. Pont de Varradòs, Vielha e Mijaran, UTM: 31TCH23, J. Muñoz coll.). Adults present from August to September.

Distribution

Central Pyrenees. Europe.

Status

Synonyms: *Podisma alpina*. Extinct in Belgium. Rare species.

Bibliography

Bellmann & Luquet 1995, p. 208; Chopard 1951, p. 231; Defaut 1978 and 1999, p. 31; Dreux 1961; Galvagni 1986 a, b and 1987; Harz 1975, p. 285; Herrera 1982, p. 70; La Greca 1985; Morales-Agacino 1950; Preston-Mafham 1990.

Bohemanella frigida* (Boheman, 1846)*Presence**

1 grid square (0.2 %).

Description

Body: 17 to 26 mm. The tegmina are approximately the length of the abdomen. Sometimes, specimens can be found with developed tegmina and wings (macropterous). Pronotum with the posterior margin at an obtuse angle.

Ecology

Present in: Alpine meadows. Found in a single location, Port de Ratera, Val d'Aran (2.500 m).

Distribution

Central Pyrenees. Europe and Alaska.

Status

Synonymy: *Melanoplus frigidus*.

Bibliography

Bellmann & Luquet 1995, p. 210; Chopard 1938 and 1951, p. 229; Defaut 1999, p. 30; Dreux 1961; Gosalvez et al. 1980; Harz 1975, p. 248; Ingrisch 1995 b and 1996; La Greca 1985; López-Fernández et al. 1984.

Cophopodisma pyrenaea* (Fieber, 1853)*Presence**

13 grid squares (3.5 %).

Description

Body: 14 to 22 mm. General greenish colour with the abdominal segments yellowish at the posterior part. Pronotum proportionally short and broad. Lower part of the posterior femur blue, which contrasts with the posterior tibiae, which are blue with white spines. Prosternum tubercle short, triangular and pointed. Without elytra.

Ecology

Present in: alpine and sub-alpine meadow. Found above 1700 m (Port del Cantó, Soriguera, Pallars Sobirà, UTM: 31TCG59, J. Gabaldón coll.) up to 2800 m (Puigmal, Queralbs, Ripollès, UTM: 31TDG29). Adults present from July to October.

Distribution

Pyrenees. Endemic to the Pyrenees.

Status

Synonymy: *Pezotettix pyrenaea*. Not very abundant species.

Bibliography

Bellmann & Luquet 1995, p. 214; Chopard 1951, p. 234; Clemente et al. 1990 b; Defaut 1999, p. 31; Harz 1975, p. 252; Herrera 1982, p. 70; Isern-Vallverdú 1990; La Greca & Messina 1979; Martorell i Peña 1879; Marty 1961; Morales-Agacino 1950.

Calliptamus italicus* (Linnaeus, 1758)*Presence**

22 grid squares (6.0 %).

Description

Body: 15 to 34 mm. In repose, the tegmina extend beyond the posterior genicular lobes. Lower stripes on the posterior femora are not complete, but only marked on the upper part. Males with very long cerci. The three species of *Calliptamus* present in Catalonia can be distinguished, above all the males. In *C. italicus* the profile of the penis can be seen in the field with the aid of the x15 microscope. In this species the penis is pointed and points backwards, unlike *C. barbarus* and *C. wattenwylianus* in which it is round, forming a small nipple on the subgenital plate.

Ecology

Present in: willow groves, calcicolous rosemary scrub, false brome, damp and semi-damp pasture, fallow and cereal field margin. Found above 130 m (Palau de Plegamans, Vallès Occidental, UTM: 31TDG30) up to 1070 m (Estaron, Guingueta d'Àneu, Pallars Sobirà, UTM: 31TCH51). Adults present from July to October.

Distribution

Central Pyrenees, Pre-Pyrenees, Transversal mountain system, central high plateaux and basins and Coastal mountain system. Europe, North Africa and Asia.

Status

Rare species.

Bibliography

Bellmann & Luquet 1995, p. 221; Burgos & Herrera 1986; Chapman & Joern 1990; Chopard 1938, 1943, p. 400 and 1951, p. 236; Defaut 1999, p. 31; Dreux 1961; Foucart 1997; García & Presa 1981; Harz 1975, p. 348; Herrera 1982, p. 72 and 1985; Jago 1963; La Greca 1985; Llorente 1982; Louveaux 1991; Marty 1961; Nagy 1983 and 1987; Pardo et al. 1990, 1991 and 1993 b; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Presa et al. 1983 and 1999; Prouteau & Robert 1973; Pulido 1990; Schmidt 1989; Termier 1991; Thorens 1984 and 1986 a; Uvarov 1934.

Calliptamus wattenwylanus* (Pantel, 1896)*Presence**

18 grid squares (4.9 %).

Description

Body: 17 to 30 mm. Tegmina shorter than the abdomen. Lower stripes on the posterior femora are not complete, but only marked on the upper part. Males with very long cerci. Shape of the penis small and round, not pointing backwards as in *C. italicus*. The males of *C. wattenwylanus* can be distinguished from *C. barbarus* by the shape of their elytra: in *C. wattenwylanus* the edges taper towards the apex and in *C. barbarus* the edges are almost parallel.

Ecology

Present in: siliceous rockrose scrub and heath, small meadow, fallow and cereal field margins. Found above 80 m (Cap Norfeu, Roses, UTM: 31TEG27) up to 463 m (Os de Balaguer, Noguera, UTM: 31TCG13). Adults present from June to August.

Distribution

In two separate nuclei: Central depression and Empordà plains. Southern Europe and North Africa.

Status

Abundant species.

Bibliography

Arcos & Pascual 1988; Badih & Pascual 1998; Beiro et al. 1998; Bellmann & Luquet 1995, p. 76; Chopard 1943, p. 402 and 1951, p. 84; Defaut 1999, p. 32; Foucart 1997; García & Presa 1981; Gómez-Ladrón de Guevara & Presa 1990; Harz 1975, p. 350; Herrera 1982, p. 73; Jago 1963; Llorente 1982; Massa 1998; Pardo et al. 1990, 1991 and 1993 b; Pascual 1978 a, b, c and d; Presa & Monserrat 1978; Presa et al. 1999.

Calliptamus barbarus* (Costa, 1836)*Presence**

137 grid squares (37.4 %).

Description

Body: 17 to 30 mm. Tegmina shorter than the abdomen or reaching just to the tip, generally extending beyond the posterior genicular lobes. Inner stripes on the posterior femur extended downwards a great deal. Males with very long cerci. Males have a round-shaped penis.

Ecology

Present in: willow groves, Mediterranean pine forest, maquis, calcicolous rosemary scrub, siliceous rockrose scrub and heath, thyme bushes, kermes oak, dry thorny scrub, heath, brambles, box scrub, jonquil meadows, false brome, savannah-type meadow, dry field of false brome, small meadow, continental wilderness, damp and semi-damp pasture, stony rivers, cultivated land, river grassland and fallow and cereal field margin. Found above 8 m (Calella, Maresme, UTM: 31TDG70, MZB coll.) up to 1275 m (Setcases, Ripollès, UTM: 31TDG49). Adults present from July to October.

Distribution

Throughout Catalonia. Southern Europe, North Africa and Asia.

Status

Very abundant species

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Alonso & Herrera 1982; Arcos & Pascual 1988; Baccetti et al. 1995; Badih & Pascual 1998; Badih et al. 1997; Barranco & Pascual 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 222; Bland et al. 1996; Burgos & Herrera 1986; Chopard 1943, p. 403 and 1951, p. 239; Clemente et al. 1985, 1987 and 1990 b; Defaut 1999, p. 32; Eiroa & Novoa 1987; Foucart 1997; Gangwere & Llorente 1992; Gangwere & Spiller 1995; García & Presa 1981; García et al. 1984; Gómez-Ladrón de Guevara & Presa 1990; González-García 1987; Harz 1975, p. 350; Hernández et al. 1998; Herrera 1982, p. 73 and 1985; Herrera & Larumbe 1996; Isern-Vallverdú & Pardo 1990; Jago 1963; Llorente 1980 and 1982; Lock 1999; Louveaux 1991; Massa 1998; Naskrecki & Ünal 1995; Olmo 1990; Olmo-Vidal 1997 a, 2000 a, b, c and 2001 a; Olmo-Vidal & Llimona 2000; Pardo et al. 1990, 1991 and 1993 b; Pascual 1975; Pinedo & Llorente 1987 and 1988; Ponel & Hebrard 1988; Presa & Monserrat 1978; Presa et al. 1983 and 1999; Pulido 1990; Schmidt 1989; Szijj 1992; Terminal 1991; Thorens 1986 b; Ünal 2000.

Paracaloptenus bolivari* (Uvarov, 1942)*Presence**

40 grid squares (10.9 %).

Description

Body: 14 to 38 mm. General brown colouring with the lateral carinae of the pronotum cream coloured. Short tegmina, lobiform, with one pale longitudinal stripe. Males with very long cerci, similar to those of *Calliptamus*. Tenth tergite of the males swollen. Posterior tibiae reddish.

Ecology

Present in: heath, box scrub, grassy margins of damp woodland, damp and semi-damp pasture and subalpine meadow. Found above 245 m (Fuirosos, Sant Celoni, Vallès Oriental, UTM: 31TDG61) up to 1842 m (Pla de Beret, Naut Aran, UTM: 31TCH33). Adults present from July to October.

Distribution

Pyrenees, Pre-Pyrenees, Transversal mountain system and Southern tip of the Coastal mountain system (Ports de Beceit). North east of the Iberian Peninsula, South of France and Sardinia.

Status

Not very abundant species.

Bibliography

Bellmann & Luquet 1995, p. 76; Chopard 1951, p. 240; Clemente et al. 1990 b; Defaut 1999, p. 32; Harz 1975, p. 365; Herrera 1982, p. 74; Isern-Vallverdú & Pardo 1990; Llorente 1982; Martorell i Peña 1879; Navás 1929; Willemsse 1973.

Eyprepocnemis plorans* (Charpentier, 1825)*Presence**

11 grid squares (3.0 %).

Description

Body: 26 to 42 mm. Has a dark stripe that comes out from the lower part of the eyes. Dorsal part of the pronotum flat with a very wide dark stripe. Has a cylindrical prosternum tubercle. Transparent wings. Posterior tibiae blue from the base to the middle and red to the tip in contact with the tarsi, which are also red.

Ecology

Present in: reeds, river grassland and cultivated land. On the Delta del Llobregat there are two generations a year. All areas at sea level except Sant Grau, Tossa de Mar, Selva, UTM: 31TDG92 at 200 m. Adults present from June to November.

Distribution

Coastal area. Southern Europe, North Africa and Asia. The genus *Eyprepocnemis* is mainly found in Africa with *E. plorans* the only species in Europe.

Status

Not very abundant species.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Arnaldos & Presa 1992 and 1993; Badih & Pascual 1998; Barranco & Pascual 1993; Chopard 1938, 1943, p. 407 and 1951, p. 235; Defaut 1999, p. 33; Descamps 1970; Gangwere & Llorente 1992; Gangwere & Spiller 1995; García & Presa 1981; Gómez-Ladrón de Guevara et al. 1992; Grunshaw 1990; Harz 1975, p. 371; Herrera 1982, p. 74; Llorente 1980; Lock 1999; Massa 1998; Mestre 1988; Mungai et al. 1995; Naskrecki & Ünal 1995; Olmo 1990; Pardo et al. 1991; Pinedo & Llorente 1987; Presa & Monserrat 1978; Schmidt & Johnsen 1999.

Heteracris littoralis* (Rambur, 1838)*Presence**

7 grid squares (1.9 %).

Description

Body: 25 to 50 mm. Has a dark longitudinal mark in dorsal view, which goes from the head to the pronotum, extending just beyond the elytra. Pronotum is wider in the metazona. Cylindrical posternum tubercle, wide and rounded at the apex. Posterior femora with three black marks on the inner face, not counting the knees, which are also dark. Posterior tibia red at the apical half, yellow at the base and with two black marks. Long tegmina extending beyond the abdomen in both sexes, with brown marks on a paler background. Male cerci wide and curved upwards in lateral view.

Ecology

Present in: coastal dune. All locations at sea level. Adults present from August to November.

Distribution

Coastal area. Iberian Peninsula, North Africa and Asia.

Status

Synonymy: *Thisoicetrus littoralis*. Rare species.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Badih & Pascual 1998; Badih et al. 1997; Barranco & Pascual 1993; Chopard 1943 p. 409; Clemente et al. 1985; Cuní i Martorell 1887; Descamps 1970; Galvagni 1978; García & Presa 1981; Harz 1975, p. 381; Herrera 1982, p. 75; Massa 1998; Mestre 1988; Olmo 1990; Parihar 1984; Pinedo & Llorente 1987.

Psophus stridulus* (Linnaeus, 1758)*Presence**

28 grid squares (7.6 %).

Description

Body: 23 to 40 mm. Pronotum with an entire longitudinal median carina and two sunken points, one on either side of the carina. Posterior margin of the pronotum angled. Elytra longer than the abdomen in males and shorter in females. Red wings with a black edge. Posterior femora paler than the body, with two darker marks on the upper part. Emits a strident noise when flying.

Ecology

Present in: heath, box scrub, damp and semi-damp pasture and subalpine meadow. Found above 630 m (Les, Val d'Aran, UTM: 31TCH14, MZB coll.) up to 1600 m (Salt del Pish. Pont de Varradòs, Vielha e Mijaran, UTM: 31TCH23, J. Muñoz coll.). Adults present from July to September.

Distribution

Pyrenees, Pre-Pyrenees and Transversal mountain system. Europe and Asia.

Status

In regression. Also in regression throughout western Europe, and has disappeared from places in the northern part of the distribution area. It has been stated extinct in Belgium and Holland.

Bibliography

Antognoli & Zettel 1996; Baccetti 1954 and 1963; Bellmann & Luquet 1995, p. 230; Bolívar 1876; Buchweitz 1993; Chopard 1938 and 1951, p. 243; Clemente et al. 1990 b; Defaut 1999, p. 34; Dreux 1961; Gangwere & Llorente 1992; Gangwere et al. 1985; Harz 1975, p. 458; Herrera 1982, p. 77 and 1985; Herrera & Larumbe 1996; Isern-Vallverdú & Pardo 1990; Kleukers 1990; Kolb & Fischer 1994; La Greca 1985; Luquet 1978; Martorell i Peña 1879; Marty 1961 and 1969; Mossot & Ewald 1994; Nagy 1987; Navás 1910 b; Pinedo & Llorente 1988; Prouteau & Robert 1973; Rague & Reynolds 1998, p. 282; Vaisanen et al. 1991.

Locusta migratoria* (Linnaeus, 1758)*Presence**

48 grid squares (13.1 %).

Description

Body: 29 to 55 mm. It can have two different morphologies, although in Catalonia the solitary form is found. In the solitary phase, the pronotum is raised with the front and posterior edges angled. Tegmina extending beyond the tip of the abdomen. Posterior femora with the upper carina slightly saw shaped. Posterior tibiae reddish. Subgenital plate of the male conical and slightly elongated.

Ecology

Present in: maquis, calcicolous rosemary scrub, siliceous rockrose scrub and heath, saltwort herbaceous, false brome, savannah-type meadow, dry field of false brome, small meadow, continental wilderness, stony rivers, cultivated land, fallow and cereal field margin. Found above 20 m (L'Ametlla de Mar, Baix Ebre, UTM: 31TCF12) up to 764 m (Claverol, Pallars Jussà, UTM: 31TCG37). Probably in two generations in some areas, hibernating as adults. Adults present from April to November.

Distribution

Central Pre-Pyrenees, Empordà plains, Transversal mountain system, central high plateaux and basins, Central Depression, Coastal mountain system and Coastal area. Europe and Africa.

Status

Synonymy: *Pachytylus cinerascens*, *P. danicus*. Not very abundant species.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Arcos & Pascual 1988; Baccetti 1954 and 1963; Baccetti et al. 1995; Badih & Pascual 1998; Bailey & Rentz 1990; Balança et al. 1999; Bellmann & Luquet 1995, p. 232; Bland et al. 1996; Bolívar 1876; Chapman & Joern 1990; Chopard 1938, 1943, p. 296 and 1951, p. 245; Defaut 1999, p. 34; Eiroa & Novoa 1987; Farrow & Longstaff 1986; Foucart 1997; Gangwere & Llorente 1992; Gangwere et al. 1998; García & Presa 1981; Garcia et al. 1984; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 466; Herrera 1982, p. 77; Herrera & Larumbe 1996; Kleukers 1990; Köhler et al. 2000; Lecoq & Sukirno 1999; Llorente 1968 and 1980; Lock 1999; Martorell i Peña 1879; Massa 1998; Mestre 1988; Mungai et al. 1995; Naskrecki & Ünal 1995; Olmo 1990; Olmo-Vidal 2000 a, b and c; Olmo-Vidal & Llimona 2000; Pardo et al. 1990, 1991 and 1993 b; Pascual 1975; Pinedo & Llorente 1988; Presa & Monserrat 1978; Presa et al. 1999; Preston-Mafham 1990; Schmidt 1989; Szijj 1992; Ünal 2000; Woodrow 1965.

Oedaleus decorus (Germar, 1826)

Presence

21 grid squares (5.7 %).

Description

Body: 18 to 43 mm. Pronotum with the upper carina complete and raised, with four pale stripes in an X shape and the transversal furrow not very pronounced. Base of the tegmina with two wide stripes separated by a very pale stripe. Apical part almost transparent with small brown marks. Yellowish wings with a curved, black stripe situated in the middle. Posterior femora with two blackish-brown stripes and posterior tibiae reddish.

Ecology

Present in: siliceous rockrose scrub and heath, thyme bushes, small meadow, continental wilderness, and fallow and cereal field margin. Found above 56 m (Santa Coloma de Gramanet, Barcelonès, UTM: 31TDF38, M. Carles-Tolrà coll.) up to 1048 m (Alins, Pallars Sobirà, UTM: 31TCH61). Probably has a certain migratory nature, confirmed by the presence of a specimen in Alins (Pallars Sobirà) outside its current area of distribution, in a swath meadow, a habitat very different from the one it usually occupies. Findings before 1970, show that this species used to have a broader area of distribution. Adults present from June to August.

Distribution

Its current distribution is apparently restricted to the Central depression and Empordà plains, although an isolated specimen has been found in the Central Pyrenees. Before 1970 (all before 1940) it extended through the Central Pre-Pyrenees, central high plateaux and basins and central part of the Coastal mountain system. Europe, North Africa and Asia.

Status

Species in danger of extinction in Switzerland. Synonymy: *Aedaleus nigro-fasciatus*. Not very abundant species.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Arcos & Pascual 1988; Baccetti et al. 1995; Badih & Pascual 1998; Bellmann & Luquet 1995, p. 234; Bland et al. 1996; Chopard 1938, 1943, p. 295 and 1951, p. 244; Defaut 1999, p. 35; Eiroa & Novoa 1987; Foucart 1997; Gangwere & Llorente 1992; García & Presa 1981; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 472; Herrera 1982, p. 78; Martorell i Peña 1879; Marty 1969; Massa 1994 and 1998; Nagy 1983 and 1987; Naskrecki & Únal 1995; Pardo et al. 1990, 1991 and 1993 b; Pascual 1975, 1978 a, b, c and d; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Presa & Monserrat 1978; Presa et al. 1999; Pulido 1990; Ritchie 1981; Schmidt 1989; Únal 2000; Uvarov 1934.

Oedipoda caerulescens (Linnaeus, 1758)

Presence

108 grid squares (29.5 %).

Description

Body: 15 to 28 mm. The species of the genus *Oedipoda* can be distinguished by the colour of the hind wings, which can only be seen during flight. This is why it is a group that is very difficult to distinguish if the animal is not captured and seen on one's hand. A very important feature is the median carina of the pronotum and the extension and placement of the dark wing stripe. In *O. caerulescens* the wings are blue and the dark wing stripe extends around the edge of the wing, without reaching the posterior margin. At the front, this stripe extends towards the body when the wings are unfolded, in an attenuated way. Externally, its colour is very variable, depending on the substratum in which it lives. Median carina of the pronotum slightly higher in the prozona than in the metazona. Front carina of the head without transversal carina between the antennae. This species is very similar to *O. fuscocincta*, from which it differentiates mainly in the shape of the wing marking and the median carina of the pronotum.

Ecology

Present in: calcicolous rosemary scrub, siliceous rockrose scrub and heath, kermes oak, heath, savannah-type meadow, dry field of false brome, small meadow, continental wilderness, river and coastal dune, stony rivers, cultivated land, fallow and cereal field margin. Found above 4 m (Poble Nou, Barcelona (city), Barcelonès, UTM: 31TDF38) up to 1706 m (Turó de l'Home, Fogars de Montclús, Vallès Oriental, UTM: 31TDG52, C. García de Castro coll.). Adults present from May to November.

Distribution

Throughout Catalonia. Europe, Asia and North Africa.

Status

Abundant species.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Alonso & Herrera 1982; Antognoli & Zettel 1996; Arcos & Pascual 1988; Baccetti 1963; Badih & Pascual 1998; Barranco & Pascual 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 76; Bland et al. 1996; Bolívar 1876; Burgos & Herrera 1986; Chopard 1938, 1943, p. 298 and 1951, p. 84; Clemente et al. 1985 and 1990 b; Cuní i Martorell 1887; Defaut 1999, p. 36; Dreux 1961; Eiroa & Novoa 1987; Foucart 1997; Gangwere & Llorente 1992; García & Presa 1981; Garcia et al. 1984; Gómez-Ladrón de Guevara et al. 1992; González-García 1987; Haes & Harding 1997; Harz 1975, p. 486; Hernández et al. 1998; Herrera 1982, p. 80 and 1985; Herrera & Larumbe 1996; Isern-Vallverdú & Pardo 1990; Kleukers 1990; Kuchenhoff 1994; La Greca 1985; Levita 1970; Llorente 1980; Lock 1999; Marshall & Haes 1988; Marty 1969; Massa 1998; Nagy 1983 and 1987; Naskrecki & Ünal 1995; Olmo 1990; Olmo-Vidal 2000 a, c and 2001 a; Olmo-Vidal & Llimona 2000; Pardo et al. 1991 and 1993 b; Pascual 1978 a, b, c and d; Pinedo & Llorente 1987 and 1988; Presa & Monserrat 1978; Presa et al. 1983 and 1999; Prouteau & Robert 1973; Pulido 1990; Schmidt 1989; Thorens 1984 and 1986 a; Ünal 2000; Uvarov 1934.

Oedipoda germanica* (Latreille, 1853)*Presence**

12 grid squares (3.2 %).

Description

Body: 22 to 30 mm. Forehead and pronotum less wrinkled than in *O. caerulescens*. Median carina of the pronotum not very raised. Furrow of the pronotum not as marked as in *O. caerulescens*. Red wings with an arched black stripe, which almost reaches the posterior margin of the wing and in the front also extends towards the body with the wings unfolded. Front carina of the head without transversal carina between the antennae.

Ecology

Present in: subalpine meadow with outcrops of mother rock and stony rivers. Found above 100 m (cap de Norfeu, Alt Empordà, UTM: 31TEG72) up to 1958 m (Núria, Queralbs, Ripollès, UTM: 31TDG39, MZB coll.). Adults present from July to October.

Distribution

Pyrenees, Pre-Pyrenees and Transversal mountain system. Europe.

Status

In regression in France. Rare species.

Bibliography

Baccetti 1963; Bellmann & Luquet 1995, p. 240; Burgos & Herrera 1986; Chapman & Joern 1990; Chopard 1938, 1951, p. 251; Defaut 1999, p. 35; Dreux 1961; Foucart 1997; Harz 1975, p. 488; Herrera 1982, p. 81 and 1985; La Greca 1985; Marty 1961 and 1969; Mossot & Ewald 1994; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Schmidt 1989; Thorens 1984 and 1986 a; Ünal 2000.

***Oedipoda fuscocincta* Lucas, 1849**

Presence

38 grid squares (10.3 %).

Description

Body: 22 to 30 mm. Very similar to *O. caerulescens* from which it can be differentiated by the shape of the wing marking and the carina of the pronotum. In this species the wing marking almost reaches the posterior margin of the wing, unlike *O. caerulescens* in which this stripe stops well before this. In addition, in contrast to *O. caerulescens*, this mark does not extend from the front part towards the body when the wings are extended and if it does extend it is not attenuated, but with the start of a wide band that ends abruptly. In the grid squares where the two species are present, they can be found in the same habitat. This fact can facilitate the identification of both species by comparison, if you can observe them on your hand. In *O. caerulescens* the carina of the pronotum, seen in profile, is more raised than in *O. fuscocincta*. The antennae are proportionally longer in *O. fuscocincta* than in *O. caerulescens*. In *O. fuscocincta* the frontal carina of the head is raised above the ocellus.

Ecology

Present in: maquis of European fan palm, calcicolous rosemary scrub, siliceous rockrose scrub and heath, small meadow and stony rivers. Found above 30 m (Santa Cristina d'Aro, Baix Empordà, UTM: 31TEG02, J. Martí coll.) up to 764 m (Claverol, Pallars Jussà, UTM: 31TCG37). Adults present from June to November.

Status

Not very abundant species.

Distribution

Central Pre-Pyrenees, Transversal mountain system, central high plateaux and basins, Central Depression and Coastal mountain system. Europe and North Africa.

Bibliography

Aguirre & Pascual 1988; Alonso & Herrera 1982; Arcos & Pascual 1988; Badih & Pascual 1998; Barranco & Pascual 1993; Beiro et al. 1998; Bland et al. 1996; Burgos & Herrera 1986; Chopard 1938, 1943, p. 299 and 1951, p. 252; Clemente et al. 1990 b; Defaut 1999, p. 36; Gangwere & Llorente 1992; García & Presa 1981; Garcia et al. 1984; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 487; Hernández et al. 1998; Herrera 1982, p. 81 and 1985; Herrera & Larumbe 1996; Isern-Vallverdú & Pardo 1990; Llorente 1980; Massa 1998; Olmo-Vidal 2000 c; Pardo et al. 1991 and 1993 b; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Presa & Monserrat 1978; Presa et al. 1983 and 1999; Pulido 1990.

***Oedipoda charpentieri* Fieber, 1853**

Presence

23 grid squares (6.2 %).

Description

Body: 15 to 23 mm. Median carina of the pronotum seen in profile, is much higher in the prozona than in the metazona, separated by a central very marked furrow in this species. Blue wings, although they may occasionally be pinkish, with an arched black stripe which, on the front part (costal), extends to the base of the wing. By contrast, it extends very slightly towards the posterior margin, reaching half way along the wing.

Ecology

Present in: calcicolous rosemary scrub, thyme bushes, continental wilderness. and cereal fallow. Found above 6 m (El Prat de Llobregat, Baix Llobregat, UTM: 31TDF27) up to 500 m (Coll de les Camposines, La Fatarella, Terra Alta, UTM: 31TBF85). Adults present from June to November.

Distribution

Central high plateaux and basins, Central Depression and southern tip of the Coastal mountain system. Southern Europe, North Africa and Asia.

Status

Not very abundant species.

Bibliography

Aguirre & Pascual 1988; Alonso & Herrera 1982; Arcos & Pascual 1988; Barranco & Pascual 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 236; Burgos & Herrera 1986; Chopard 1938, 1943, p. 300 and 1951, p. 253; Defaut 1999, p. 36; Foucart 1997; Gangwere & Llorente 1992; García & Presa 1981; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; González-García 1987; Harz 1975, p. 492; Herrera 1982, p. 82 and 1985; Herrera & Larumbe 1996;; La Greca 1994; Marty 1969; Olmo 1990; Olmo-Vidal 2000 c; Pardo et al. 1990, 1991 and 1993 b; Pascual 1975, 1978 a, b, c and d; Pinedo & Llorente 1987 and 1988; Presa & Monserrat 1978; Presa et al. 1983 and 1999; Pulido 1990.

Celes variabilis* (Pallas, 1771)*Presence**

2 grid squares (0.5 %).

Description

Body: 18 to 34 mm. Furrow of the pronotum situated in the middle and with two or three small posterior carinae. Wings with a pink base (sometimes blue) and a dark margin. Upper carina of the femurs complete, which differentiates it from the genus *Oedipoda* where this carina is incomplete.

Ecology

Its habitat in Catalonia is unknown. In other areas of Europe it lives in rockrose habitats. Found above 809 m (Castellbó, Montferrer i Castellbó, Alt Urgell, UTM: 31TCG69, MZB coll.) up to 1730 m (Sant Joan de l'Erm, Montferrer i Castellbó, Alt Urgell, UTM: 31TCG59, MZB coll.). Adults present in July.

Distribution

Central Pre-Pyrenees. Europe and Asia.

Status

In regression. Extinct east of Austria. Rare species.

Bibliography

Bellmann & Luquet 1995, p. 242; Bolívar 1876; Chopard 1951, p. 248; Defaut 1999, p. 37; Harz 1975, p. 518; Herrera 1982, p. 83; La Greca 1994; Nagy 1983; Ponel & Hebrard 1988; Ünal 2000.

Sphingonotus caerulans* (Linnaeus, 1767)*Presence**

63 grid squares (17.2 %).

Description

Body: 14 to 31 mm. Pronotum very flat in the metazona with the median carina only slightly marked, unlike the genus *Oedipoda* in which the carina is raised. Upper carina of the posterior femora complete, characteristic of the genus *Sphingonotus*, unlike the genus *Oedipoda* which has a decrease at the posterior part of the femur. Blue wings without a dark stripe.

Ecology

Present in: calcicolous rosemary scrub, siliceous rockrose scrub and heath, savannah-type meadow, small meadow, continental wilderness, coastal and fluvial dune, stony rivers and fallow. It prefers areas with very little vegetation and outcrops of mother rock. Above 4 m (Els Muntanyans, Torredembarra, UTM: 31TCF65) up to 1600 m (Santa Creu, Soriguera, UTM: 31TCG59). Adults present from May to November.

Distribution

Pre-Pyrenees, Empordà plains, central high plateaux and basins, Central depression, coastal mountain system and coastal area. Europe and North Africa

Status

Synonymy: *Sphinctonotus caeruleans*. Not very abundant species.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Arcos & Pascual 1988; Baccetti 1963; Baccetti et al. 1995; Badih & Pascual 1998; Barranco & Pascual 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 246; Bland et al. 1996; Bolívar 1876; Burgos & Herrera 1986; Chopard 1943, p. 317 and 1951, p. 254; Clemente et al. 1985; Cuní i Martorell 1887; Defaut 1999, p. 37; Eiroa & Novoa 1987; Foucart 1997; Gangwere & Llorente 1992; García & Presa 1981; García et al. 1984 and 1997; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; González-García 1987; Harz 1975, p. 518; Hernández et al. 1998; Herrera 1982, p. 83 and 1985; Herrera & Larumbe 1996; Martorell i Peña 1879; Massa 1998; Mistshenko 1936; Nagy 1987; Olmo 1990; Olmo-Vidal 2000 c and 2001 a; Pardo et al. 1990, 1991 and 1993 b; Pascual 1978 a, b, c and d; Pinedo & Llorente 1987 and 1988; Ponel & Hebrard 1988; Presa & Monserrat 1978; Presa et al. 1999; Schmidt 1989.

Sphingonotus azurescens* (Rambur, 1838)*Presence**

8 grid squares (2.1 %).

Description

Body: 15 to 28 mm. Head very wrinkled. Bluish wings with a dark stripe in the middle, not the margin. Metasternum lobes leaving a rectangular-shaped space more than twice as wide as long. Prozona with a very marked median carina, raised in contact with the head. The two transversal furrows of the prozona very marked.

Ecology

Present in: gypsum thyme bushes. Found above 210 m (Menàrguens, Noguera, UTM: 31TCG12) up to 485 m (Almatret, Segrià, UTM: 31TBF87). Adults present from July to September.

Distribution

Central high plateaux and basins (western sector) and Central Depression. Southern Europe and North Africa.

Status

Cited for the first time in Catalonia. Rare species.

Bibliography

Aguirre & Pascual 1988; Baccetti et al. 1995; Badih & Pascual 1998; Barranco & Pascual 1993; Beiro et al. 1998; Bolívar 1876; Burgos & Herrera 1986; Chopard 1940, 1943, p. 315 and 1951, p. 255; Defaut 1999, p. 36; Gangwere & Llorente 1992; García & Presa 1981; Harz 1975, p. 525; Herrera 1982, p. 84 and 1985; La Greca 1994; Lock 1999; Massa 1994 and 1998; Mistshenko 1936; Pardo et al. 1991; Pascual 1975, 1978 a, b, c and d; Pinedo & Llorente 1987; Presa & Monserrat 1978; Presa et al. 1983 and 1999.

Sphingonotus arenarius* (Lucas, 1849)*Presence**

2 grid squares (0.5 %).

Description

Body: 15 to 28 mm. Head smooth. Lateral carinae of the vertex in contact with the eyes, very raised and marked. Prozona with a not very marked median carina. Area between the two furrows of the prozona without tubercles. Bluish wings with a dark stripe in the middle, not the margin, very variable in width. Metasternum lobes of the prosternum leaving a space that is less than twice as wide as long.

Ecology

Present in: coastal and fluvial dunes. Found above 4 m (Els Muntanyans, Torredembarra, Tarragonès, UTM: 31TCF65) up to 550 m (Castissent, Pallars Jussà, UTM: 31TCG06). Adults present from July to October.

Distribution

Pre-Pyrenees and coastal area. Southern Europe and North Africa.

Status

Cited for the first time in Catalonia. Sometimes as a subspecies of *Sphingonotus azurescens*. Not very abundant species.

Bibliography

Aguirre & Pascual 1988; Badih & Pascual 1998; Badih et al. 1997; Barranco & Pascual 1993; Beiro et al. 1998; Chopard 1943, p. 315 and 1951, p. 256; Clemente et al. 1985; García et al. 1997; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 529; Herrera 1982, p. 84; Mistshenko 1936; Pardo et al. 1990, 1991 and 1993 b; Pascual 1978 a, b, c and d; Presa et al. 1999.

Mioscirtus wagneri* (Eversmann, 1859)*Presence**

1 grid squares (1.0 %).

Description

Body: 12 to 22 mm. Median carina of the pronotum raised along its entire length, only interrupted by a single furrow. Femurs with two dark stripes. Upper carinae of the femur complete. Wings with a larger middle mark, a mark at the front basal margin in an elongated shape and another mark at the apex.

Ecology

Present in: herbaceous saltwort. Found above 130 m (Alcarràs, Segrià, UTM: 31TBG90) up to 210 m (Menàrguens, Noguera, UTM: 31TCG12). It is the only species present in samples from grid squares where halophyte vegetation is predominant. Adults present in June.

Distribution

Central depression. Southern Europe, North Africa and Asia.

Status

Cited for the first time in Catalonia. Rare species.

Bibliography

Badih & Pascual 1998; Chopard 1943, p. 293; Descamps 1970; Fernandes 1968; Harz 1975, p. 508; Naskrecki & Ünal 1995; Pardo et al. 1990; Presa 1979.

Acrotylus insubricus* (Scopoli, 1876)*Presence**

43 grid squares (11.7 %).

Description

Body: 14 to 25 mm. The genus *Acrotylus* is characterised by having species with a very pubescent body, with pink wings and a black stripe. The main differences between the 3 species present in Catalonia, can be found in the posterior margin of the pronotum, which in *A. insubricus* is slightly angular. In this species the wings only have small apical markings, apart from a mid band which is more developed.

Ecology

Present in: calcicolous rosemary scrub, siliceous rockrose scrub and heath, savannah-type meadow, small meadow, continental wilderness, coastal and river dune, stony rivers, cultivated land, cereal field margin and fallow. Found above 6 m (Estany Podrit, Mont-roig del Camp, Baix Camp, UTM: 31TCF24) up to 764 m (Claverol, Pallars Jussà, UTM: 31TCG37). It probably hibernates as an adult and there are two generations a year. Adults have not been found in December, January or July. Adults present from February to November.

Distribution

Pre-Pyrenees, Empordà plains, Transversal mountain system, central high plateaux and basins, Central depression, Coastal mountain system and Coastal area. South of Europe and North Africa and Asia.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Alonso & Herrera 1982; Arcos & Pascual 1988; Baccetti & Capra 1988; Badih et al. 1997; Barranco & Pascual 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 248; Bland et al. 1996; Bolívar 1876; Chapman & Joern 1990; Chopard 1940, 1943, p. 302 and 1951, p. 257; Clemente et al. 1985; Cuní i Martorell 1887; Defaut 1999, p. 38; Descamps 1970; Gangwere & Llorente 1992; Gangwere et al. 1998; García & Presa 1981; Garcia et al. 1984 a and b; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 547; Hernández et al. 1998; Herrera 1982, p. 87 and 1985; La Greca 1993; Llorente 1980; Lock 1999; Martorell i Peña 1879; Marty 1969; Massa 1994 and 1998; Nagy 1987; Naskrecki & Ünal 1995; Olmo 1990; Olmo-Vidal 2000 c and 2001 a; Pardo et al. 1990, 1991 and 1993 b; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Presa & Llorente 1979; Presa & Monserrat 1978; Presa et al. 1999; Pulido 1990; Szijj 1992; Ünal 2000.

Acrotylus patruelis* (Herrich-Schäffer, 1838)*Presence**

10 grid squares (2.7 %).

Description

Body: 14 to 25 mm. The genus *Acrotylus* is characterised by having species with a very pubescent body, with pink wings and a black stripe. The main differences between the 3 species present in Catalonia, can be found in the posterior margin of the pronotum, which in *A. patruelis* is slightly rounded, not angular. Pinkish wings with a very broad, dark, arched black stripe in the middle.

Ecology

Present in: Mediterranean savannah-type meadow and dry field of false brome. In savannah-type meadows it is the dominant species for the first year after a fire. Found above 100 m (Canyet, Badalona, Barcelonès, UTM: 31TDF39) up to 286 m (Terrassa, Vallès Occidental, UTM: 31TDG10). Judging by the observation dates, the adults probably hibernate, leading to two generations a year. Adults present from February to December.

Distribution

Central part of the Coastal mountain system. Europe and Africa.

Status

Not very abundant species.

Bibliography

Aguirre & Pascual 1988; Baccetti & Capra 1988; Baccetti et al. 1995; Badih & Pascual 1998; Barranco & Pascual 1993; Bellmann & Luquet 1995, p. 251; Bland et al. 1996; Bolívar 1876; Chapman & Joern 1990; Chopard 1940, 1943, p. 303 and 1951, p. 84; Clemente et al. 1985; Defaut 1999, p. 37; Gangwere & Llorente 1992; García & Presa 1981; Harz 1975, p. 548; Herrera 1982, p. 87; La Greca 1993; Llorente 1968; Lock 1999; Martorell i Peña 1879; Massa 1998; Mestre 1988; Naskrecki & Ünal 1995; Olmo-Vidal 2000 a, c and 2001 a; Olmo-Vidal & Llimona 2000; Pardo et al. 1991; Pascual 1975, 1978 a, b, c and d; Ponel & Hebrard 1988; Presa & Llorente 1979; Presa & Monserrat 1978; Presa et al. 1999; Schmidt & Johnsen 1999; Sjøstedt 1932; Ünal 2000.

Acrotylus fischeri* (Azam, 1901)*Presence**

16 grid squares (4.3 %).

Description

Body: 13 to 18 mm. The genus *Acrotylus* is characterised by having species with a very pubescent body, with pink wings and a black stripe. One of the main differences between the 3 species present in Catalonia can be found in the posterior margin of the pronotum, which in *A. fischeri* is slightly angular. In

this species the wings have apical marks that sometimes form a stripe, apart from the middle stripe, which is more developed. Therefore in this species, it would seem that there are two dark stripes on the wings.

Ecology

Present in: thyme bushes, box scrub and damp and semi-damp pastures. Found above 214 m (Timonedà d'Alfès, Alfès, Segrià, UTM: 31TCG00) up to 978 m (Puigsagordi, Balenyà, Osona, UTM: 31TDG32). Judging by the observation dates, the adults probably hibernate, leading to two generations a year. Adults present from March to November.

Distribution

Central Pyrenees and Central Pre-Pyrenees, central high plateaux and basins and Central Depression. Southern Europe and North Africa.

Status

Synonymy: *Acrotylus insubricus fischeri*. Not very abundant species.

Bibliography

Alonso & Herrera 1982; Arcos & Pascual 1988; Baccetti & Capra 1988; Badih & Pascual 1998; Beiro et al. 1998; Bellmann & Luquet 1995, p. 250; Chopard 1951, p. 257; Defaut 1999, p. 38; Foucart 1997; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; González-García 1987; Harz 1975, p. 547; Herrera 1982, p. 88 and 1985; Pardo et al. 1993 b; Presa & Llorente 1979; Presa et al. 1999; Pulido 1990.

***Aiolopus thalassinus* (Fabricius, 1781)**

Presence

41 grid squares (11.2 %).

Description

Body: 15 to 25 mm. General green colour, particularly in females. Pronotum almost flat, seen in profile, with the prozona shorter and narrower than the metazona and the median carina well marked. Narrow tegmina with two transversal stripes that are paler at the front. Slightly yellowy-green wings, darker at the apex. Posterior femora four times longer than wide, more stylised than in *A. strepens*. Posterior tibiae red or yellow.

Ecology

Present in: herbaceous saltwort, damp meadow of the Empordà plain, rushes, stony rivers, alfalfa fields and river grassland. Found above 5 m (Sant Pere Pescador, Alt Empordà, UTM: 31TEG07) up to 462 m (Gironella, Berguedà, UTM: 31TDG05). Adults present from June to October.

Distribution

Empordà plains, central high plateaux and basins, Central depression, Coastal mountain system and Coastal area. Europe, Africa and Asia.

Status

Synonymy: *Epacromia thalassina*.

Bibliography

Aguirre & Pascual 1988; Baccetti et al. 1995; Badih & Pascual 1998; Barranco & Pascual 1993; Bellmann & Luquet 1995, p. 252; Bland et al. 1996; Bolívar 1876; Chapman & Joern 1990; Chopard 1943, p. 288 and 1951, p. 259; Clemente et al. 1990 b; Cuní i Martorell 1887; Defaut 1999, p. 38; Descamps 1970; Foucart 1997; Gangwere & Llorente 1992; Gangwere & Spiller 1995; García & Presa 1981; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; Haldar 1986; Harz 1975, p. 554; Herrera 1982, p. 89 and 1985; Herrera & Larumbe 1996; Hollis 1968; Llorente 1968 and 1980; Lock 1999; Martorell i Peña 1879; Massa 1994 and 1998; Mestre 1988; Nagy 1983 and 1987; Naskrecki & Únal 1995; Olmo 1990; Olmo-Vidal 2000 c; Pardo et al. 1990, 1991 and 1993 b; Pascual 1975; Pinedo & Llorente 1987 and 1988; Presa & Monserrat 1978; Presa et al. 1999; Schmidt & Johnsen 1999; Schmidt 1989; Szijj 1992; Únal 2000; Uvarov 1934.

***Aiolopus strepens* (Latreille, 1804)**

Presence

71 grid squares (19.3 %).

Description

Body: 18 to 28 mm. General brownish colouring. Pronotum slightly convex, seen in profile, with the posterior margin triangular and the median carina well marked. Blue wings with a dark apex. Posterior femora three times longer than they are wide, more robust than in *A. thalassinus*, with the lower margin reddish and two dark marks on the inner face. Posterior tibiae also red.

Ecology

Present in: box scrub, false brome, savannah-type meadow, damp meadow of the Empordà plain, stony rivers, cultivated land, riverside grassland, fallow and cereal field margin. Found above 6 m (Estany Podrit, Mont-roig del Camp, Baix Camp, UTM: 31TCF24) up to 1327 m (Serrat de Broculús, Viu de Llevata, El Pont de Suert, Alta Ribagorça, UTM: 31TCG19). Adults present from February to November, which indicates that the adults hibernate and that there are two generations a year.

Distribution

Pre-Pyrenees, Empordà plains, Transversal mountain system, central high plateaux and basins, coastal mountain system and coastal area. Southern Europe, North Africa and Asia.

Status

Synonymy: *Epacromia strepens*. Not very abundant species.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Alicata & Motta 1977; Alonso & Herrera 1982; Antognoli & Zettel 1996; Arcos & Pascual 1988; Baccetti 1963; Baccetti et al. 1995; Badih & Pascual 1998; Barranco & Pascual 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 253; Bland et al. 1996; Bolívar 1876; Burgos & Herrera 1986; Chopard 1938, 1943, p. 287 and 1951, p. 258; Clemente et al. 1985; Defaut 1978 and 1999, p. 38; Descamps 1970; Eiroa & Novoa 1987; Foucart 1997; Gangwere & Llorente 1992; Gangwere & Spiller 1995; Gangwere et al. 1998; García & Presa 1981; García et al. 1984; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; González-García 1987; Harz 1975, p. 555; Hernández et al. 1998; Herrera 1982, p. 89 and 1985; Herrera & Larumbe 1996; Hollis 1968; Llorente 1980; Lock 1999; Martorell i Peña 1879; Marty 1969; Massa 1998; Messina & Lombardo 1976; Naskrecki & Ünal 1995; Olmo-Vidal 1997 a, 2000 a and c; Olmo-Vidal & Llimona 2000; Pardo et al. 1990, 1991 and 1993 b; Pascual 1975, 1978 a, b, c and d; Pinedo & Llorente 1987 and 1988; Ponel & Hebrard 1988; Presa & Monserrat 1978; Presa et al. 1999; Schmidt 1989; Ünal 2000; Uvarov 1934; Vieira 1989.

Stethophyma grossum* (Linnaeus, 1758)*Presence**

7 grid squares (1.9 %).

Description

Body: 12 to 39 mm. Lateral carinae of the pronotum practically parallel and a well marked median carina. The tegmina are almost transparent with a very pronounced yellow stripe at the front. Long ovipositor valves. Lower part of the posterior femora reddish and posterior tibiae yellow with black spines.

Ecology

Present in: mountain meadow and subalpine meadow. Lives particularly near mountain rivers and lakes. Found above 630 m (Les, Val d'Aran, UTM: 31TCH14, MZB coll.) up to 1552 m (Bonabé, Alt Àneu, Pallars Sobirà, UTM: 31TCH43). Adults present from August to September.

Distribution

Central and Eastern Pyrenees, in two separate nuclei. Europe and Asia.

Status

Synonyms: *Mecostethus grossus*. In danger of extinction in Switzerland. Rare species.

Bibliography

Bellmann & Luquet 1995, p. 260; Bolívar 1876; Chopard 1938 and 1951, p. 270; Defaut 1978 and 1999, p. 39; Dreux 1961; Haes & Harding 1997; Harz 1975, p. 572; Herrera 1982, p. 90; Herrera & Larumbe 1996; Kleukers 1990; La

Greca 1985; Marshall & Haes 1988; Martorell i Peña 1879; Marty 1969; Nagy 1983 and 1987; Ragge & Reynolds 1998, p. 284; Storozhenko & Otte 1994.

***Paracinema tricolor* (Charpentier, 1825)**

Presence

10 grid squares (2.7 %).

Description

Body: 24 to 39 mm. Conical head with the upper part of the vertex triangular. Pronotum with the dorsal part flat and with two black longitudinal marks. Prozona shorter than the metazona. Lateral carinae of the pronotum not very marked in the metazona. Posterior tibiae reddish with white spines and black apex, widening at the apex. Subgenital plate of the male very elongated, conical shape. Ovipositor with very long valves.

Ecology

Present in: damp meadow of the Empordà plain, rushes and river grassland. Lives in damp meadows near rivers and marshes. Found above 6 m (Prat de Llobregat, Baix Llobregat, UTM: 31TDF27) up to 524 m (La Pobla de Segur, Pallars Jussà, UTM: 31TCG38). Adults present from July to October.

Distribution

Central Pre-Pyrenees, Empordà plains, central high plateaux and basins, Coastal mountain system and Coastal area. Europe, North Africa and Asia.

Status

In regression. Rare species.

Bibliography

Alonso & Herrera 1982; Badih & Pascual 1998; Bellmann & Luquet 1995, p. 262; Bolívar 1876; Burgos & Herrera 1986; Chapman & Joern 1990; Chopard 1938, 1943, p. 260 and 1951, p. 267; Defaut 1999, p. 39; Eiroa & Novoa 1987; Foucart 1997; Gangwere & Llorente 1992; Gangwere & Spiller 1995; Harz 1975, p. 576; Herrera 1982, p. 91 and 1985; Herrera & Larumbe 1996; Martorell i Peña 1879; Mestre 1988; Mungai et al. 1995; Olmo 1990; Pardo et al. 1991 and 1993 b; Pinedo & Llorente 1988; Presa et al. 1999; Schmidt & Johnsen 1999; Uvarov 1934.

***Calephorus compressicornis* (Latreille, 1804)**

Presence

5 grid squares (1.3 %).

Description

Body: 12 to 18 mm. Head slightly conical with the antennae widening at the base. Vertex, in dorsal view, pointed. Narrow, elongated tegmina with the disc area marked in brown with white triangular marks. Wings slightly pinkish at the base.

Ecology

Present in: herbaceous saltwort, dunes and rushes. Found above 4 m (Els Muntanyants, Torredembarra, Tarragonès, UTM: 31TCF65) up to 210 m (Menàrguens, Noguera, UTM: 31TCG12). Adults present from July to October.

Distribution

Empordà plains, Central Depression and Coastal area. Europe and Africa.

Status

Rare species.

Bibliography

Badih & Pascual 1998; Bellmann & Luquet 1995, p. 264; Burgos & Herrera 1986; Chopard 1938, 1943, p. 258 and 1951, p. 266; Defaut 1999, p. 40; Eiroa & Novoa 1987; Gangwere & Llorente 1992; Gangwere & Spiller 1995; García & Presa 1981; González-García 1987; Harz 1975, p. 586; Herrera 1982, p. 91 and 1985; Herrera & Larumbe 1996; Llorente 1980; Lock 1999; Massa 1998; Mestre 1988; Olmo 1990; Pardo et al. 1991 and 1993 b; Pinedo & Llorente 1988; Presa & Monserrat 1978; Presa et al. 1999.

***Parapleurus alliaceus* (Germar, 1817)**

Presence

5 grid squares (1.3 %).

Description

Body: 17 to 32 mm. Pronotum with parallel lateral carinae. Has two darker lateral lines that go from behind the eyes, following the lateral carinae of the pronotum and extend as far as the tegmina. Transparent wings. Long ovipositor valves.

Ecology

Present in: mountain meadows. Lives in damp, fluvial mountain meadows. Found above 692 m (La Seu d'Urgell, Alt Urgell, UTM: 31TCG79) up to 1275 m (Setcases, Ripollès, UTM: 31TDG49, MZB coll.). Adults present from July to October.

Distribution

Eastern Pyrenees and Pre-Pyrenees. Europe and Asia.

Status

In regression. Synonymy: *Calephorus alliaceus* and *Mecostethus alliaceus*. Rare species.

Bibliography

Antognoli & Zettel 1996; Bellmann & Luquet 1995, p. 258; Chapman & Joern 1990; Chopard 1938 and 1951, p. 269; Clemente et al. 1990 b; Defaut 1999, p. 39; Harz 1975, p. 567; Herrera 1982, p. 92; Herrera & Larumbe 1996; Martorell i Peña 1879; Marty 1961 and 1969; Nagy 1983.

***Acrida ungarica* (Herbst, 1786)**

Presence

29 grid squares (7.9 %).

Description

Body: 30 to 75 mm. Head conical and vertex very elongated. Antennae very wide at the base. Carinae of the pronotum parallel to the prozona and diverging slightly in the metazona. Wings slightly greenish at the base. Short ovipositor valves.

Ecology

Present in: damp meadow of the Empordà plain, rushes and river grassland. Found above 3 m (Mouth of La Tordera, Blanes, UTM: 31TDG81) up to 278 m (Cabrianes, Sallent, Bages, UTM: 31TDG02). Adults present from August to November.

Distribution

Empordà plains, Central Depression and coastal mountain system. Europe.

Status

Up until now, all the specimens of this genus in the Iberian Peninsula had been determined as *Acrida turrita*. Having reviewed all the specimens available and consulted the bibliography, we believe that in fact the species present in Catalonia is *Acrida ungarica*. Not very abundant species.

Bibliography

Badih & Pascual 1998; Bellmann & Luquet 1995, p. 266; Bolívar 1876; Burgos & Herrera 1986; Chopard 1951, p. 266; Defaut 1999, p. 33; Foucart 1997; Gangwere & Llorente 1992; Harz 1975, p. 428; Herrera 1982, p. 94; Jago

1996; Martorell i Peña 1879; Morales-Agacino p. 24; Nagy 1983 and 1987; Olmo 1990; Olmo-Vidal 2000 c; Pinedo & Llorente 1987; Ponel & Hebrard 1988; Preston-Mafham 1990; Schmidt 1989; Szijj 1992.

***Truxalis nasuta* (Linnaeus, 1758)**

Presence

3 grid squares (0.8 %).

Description

Body: 35 to 73 mm. Head and body very long. Antennae widened in the form of a leaf. Pronotum with a metazona that is very much broader than the prozona, which distinguishes it from *Acrida ungarica*, in which the prozona and metazona are practically the same width with the lateral carinae of the pronotum more parallel and diverging slightly in the metazona. The base of the wings is slightly pinkish.

Ecology

Present in: continental wilderness and fallow. Found above 202 m (Artesa de Lleida, Segrià, UTM: 31TCF09) up to 220 m (Sunyer, Segrià, UTM: 31TBF99). Adults present in June.

Distribution

Central Depression, Southern Europe and Africa.

Status

Synonymy: *Acridella unguiculata* and *Acrida nasuta*.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Baccetti et al. 1995; Badih & Pascual 1998; Badih et al. 1997; Barranco & Pascual 1993; Bland et al. 1996; Bolívar 1876; Chapman & Joern 1990; Chopard 1943, p. 257; Clemente et al. 1985; Descamps 1970; García & Presa 1981; García et al. 1997; Gómez-Ladrón de Guevara & Presa 1990; Harz 1975, p. 434; Herrera 1982, p. 94; Jago 1996; Llorente 1980; Lock 1999; Martorell i Peña 1879; Massa 1994; Morales-Agacino p. 24; Pardo et al. 1990, 1991 and 1993 b; Pascual 1975; Presa et al. 1999.

***Brachycrotaphus tryxalicerus* (Fischer, 1853)**

Presence

15 grid squares (4.0 %).

Description

Body: 19 to 32 mm. Head and body elongated. Antennae widening, slightly longer than the head and pronotum together. The pronotum has five parallel, longitudinal carinae, the central one being the most marked. Legs proportionally short. The males have the inner apical spines modified in the form of striated laminae. Subgenital plate of the male narrow and elongated, seen in profile.

Ecology

Present in: savannah-type meadow. It is the species that dominates savannah-type meadows of *Hyparrhenia hirta*, plant on which it feeds and which supports it. Found above 13 m (Castelldefels, Baix Llobregat, UTM: 31TDF17, MZB coll.) up to 238 m (Manresa, Bages, UTM: 31TDG01, MNCN coll.). It is attracted by artificial light. Adults present from July to October.

Distribution

Coastal mountain system and coastal area. Iberian Peninsula, Sicily and Africa.

Status

Synonymies: *Ochrilidia boscae*, *Brachycrotaphus tryxalicerus*. Abundant species.

Bibliography

Aguirre & Pascual 1988; García & Presa 1981; Harz 1975, p. 601; Herrera 1982, p. 95; Llorente 1980; Mestre 1988; Morales-Agacino p. 24; Olmo-Vidal 2000 a, b, c and 2001 a; Olmo-Vidal & Llimona 2000; Presa et al. 1999; Ragge & Reynolds 1998, p. 286; Schmidt & Johnsen 1999; Uvarov 1932.

***Chrysochraon dispar* (Germar, 1835)**

Presence

1 grid square (0.2 %).

Description

Body: 16 to 22 mm. Pronotum with the lateral carinae parallel and with the longitudinal median carina marked. The tegmina of the male have a rounded margin and reach almost the tip of the abdomen, in contrast to the female in which they only reach the third abdominal tergite and end in a point. Lower part of the femurs and of the posterior tibiae red-lilac coloured in the females and yellow in the male. Valves of the ovipositor short and strong.

Ecology

Present in: mountain meadows. Lives in very damp meadows. Found in a single location at 1552 m (Bonabé, Alt Àneu, Pallars Sobirà, UTM: 31TCH43). Adults present from July to September.

Distribution

Central Pyrenees. Europe.

Status

Cited for the first time in Catalonia. Species in danger of extinction in Switzerland. Rare species.

Bibliography

Alonso & Herrera 1982; Bellmann & Luquet 1995, p. 278; Chopard 1938 and 1951, p. 271; Defaut 1978 and 1999, p. 41; Dreux 1961; Harz 1975, p. 641; Herrera 1982, p. 96 and 1985; Nagy 1983 and 1987; Ragge & Reynolds 1998, p. 296; Renner & Kremer 1980.

***Euthystira brachyptera* (Ocskay, 1826)**

Presence

4 grid squares (1.0 %).

Description

Body: 13 to 26 mm. Head slightly conical. Pronotum with parallel lateral carinae. The tegmina in the males reach half way up the abdomen, by contrast, in the females they are two small lateral lobes that reach as far as the second abdominal tergite. Very long ovipositor valves.

Ecology

Present in: damp pasture, swath meadow, alpine and sub-alpine meadow. Found above 1348 m (Tredòs, Naut Aran, Val d'Aran, UTM: 31TCH23, MZB coll.) up to 2176 m (Montcorbison, Vielha e Mijaran, UTM: 31TCH23). Adults present from July to September.

Distribution

Pyrenees. In two separate nuclei: one in the Central Pyrenees and the other in the Eastern Pyrenees. Europe.

Status

Synonymy: *Chrysochraon brachypterus*. Not very abundant species.

Bibliography

Alonso & Herrera 1982; Antognoli & Zettel 1996; Baccetti 1963; Bellmann & Luquet 1995, p. 282; Chopard 1938 and 1951, p. 272; Defaut 1978 and 1999, p. 41; Dreux 1961; Harz 1975, p. 648; Herrera 1982, p. 96 and 1985; Herrera & Larumbe 1996; La Greca 1985; Luquet 1978; Marty 1961 and 1969; Nagy 1987; Prouteau & Robert 1973; Ragge & Reynolds 1998, p. 296; Thorens 1984 and 1986 a.

***Stauroderus scalaris* (Fischer-Waldheim, 1846)**

Presence

33 grid squares (9.0 %).

Description

Body: 18 to 29 mm. Lateral carinae of the pronotum angled in the prozona and the longitudinal median carina raised and well marked. The typical furrow is in the middle of the pronotum. Tegmina and wings very dark in both sexes. The tegmina have very wide costal and mediastinum areas with very parallel transversal nerves, it would seem that its name comes from this similarity of these veins to a step. It has a lobe at the front margin of the tegmen meaning that the margin is not straight, characteristic also present in the genus *Chorthippus*. Posterior tibiae red or yellow.

Ecology

Present in: damp and semi-damp pasture, swath meadow and subalpine meadow. Found above 966 m (Vallfogona de Ripollès, Ripollès, UTM: 31TDG47) up to 1842 m (Pla de Beret, Naut Aran, UTM: 31TCH33, J. M. Roig coll.). Adults present from June to September.

Distribution

Pyrenees, Pre-Pyrenees and Transversal mountain system. Europe and Asia.

Status

In regression in Germany. Synonymy: *Gomphocerus scalaris*. Abundant species.

Bibliography

Antognoli & Zettel 1996; Baccetti 1954 and 1963; Bellmann & Luquet 1995, p. 322; Chopard 1938 and 1951, p. 288; Clemente et al. 1990 b; Defaut 1978 and 1999, p. 52; Dreux 1961; González-García 1987; Harz 1975, p. 814; Herrera & Larumbe 1996; Herrera 1982, p. 96 and 1985; Isern-Vallverdú & Pardo 1990; Isern-Vallverdú 1990; La Greca 1975 and 1985; Luquet 1978; Marty 1961 and 1969; Nagy 1987; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Preston-Mafham 1990; Ragge & Reynolds 1998, p. 375; Uvarov 1934.

***Chorthippus apricarius* (Linnaeus, 1758)**

Presence

26 grid squares (7.1 %).

Description

Body: 13 to 22 mm. Tegmina with the costal and mediastinum fields very broad when compared to the rest of the species of the genus *Chorthippus*. The nerves look like those of *Stauroderus scalaris*, but the wings of *Ch. apricarius* are not dark. It has a lobe at the front margin of the tegmen. meaning that the margin is not straight; a feature that is common to all the species of this genus and which distinguishes them from the genera *Omocestus* and *Stenobothrus*.

Ecology

Present in: heath, damp and semi-damp pasture, swath meadow, Alpine and subalpine meadow. Found above 700 m (Volcà de Santa Margarida, Santa Pau, Garrotxa, UTM: 31TDG66) up to 2500 m (Coma de l'Embut, Núria, Ripollès, UTM: 31TDG29). Adults present from July to September.

Distribution

Pyrenees, Pre-Pyrenees and Transversal mountain system. Europe and Asia.

Status

Belongs to the subgenus *Glyptobothrus*, which are different in the angled form of the lateral carinae of the pronotum. Abundant species.

Bibliography

Bellmann & Luquet 1995, p. 324; Chopard 1951, p. 292; Clemente et al. 1990 b; Defaut 1978 and 1999, p. 48; Dreux 1961; Fischer et al. 1996; González-García 1987; Harz 1975, p. 859; Herrera 1982, p. 97 and 1985; Herrera &

Larumbe 1996; Kleukers & Ode 1992; La Greca 1985; Marty 1961 and 1969; Nagy 1983 and 1987; Ragge & Reynolds 1998, p. 379; Ünal 2000; Uvarov 1934.

***Chorthippus brunneus* (Thunberg, 1815)**

Presence

11 grid squares (2.9 %).

Description

Body: 14 to 25 mm. This species belongs to the group of species called *biguttulus*. The group is made up of 3 very close species. *Ch. biguttulus*, *Ch. brunneus* and *Ch. mollis*. The best way to distinguish them in the wild is by their song, although there are some morphological differences that can help us to distinguish them. The length/width relation of the tegmina of *Ch. brunneus* is of 4.8 in the males and of 6 in the females, which can be calculated from a photograph of the profile. The stridulatory row has fewer than 90 teeth in the males and fewer than 70 in the females, situated on the inner face of the posterior femur. These teeth can only be counted correctly with a microscope of at least x 40. This feature can separate them from *Ch. jacobsi*. The distance between the stigma and the margin of the tegmen divided by the total length of the tegmen, is more than 0.38, the same as in *Ch. jacobsi*.

Ecology

Present in: mountain meadows and damp meadow of the Empordà plain. Found above 55 m (Pals, Baix Empordà, UTM: 31TEG14) up to 1842 m (Pla de Beret, Naut Aran, UTM: 31TCH33). Adults present from July to October.

Distribution

Pyrenees, Transversal mountain system and Empordà plains. Europe and Asia.

Status

Not very abundant species.

Bibliography

Aguirre et al. 1987; Atkinson & Begon 1987 a, b and 1988; Aznarez 1972; Baccetti 1963 and 1992; Bellmann & Luquet 1995, p. 332; Burgos & Herrera 1986; Butlin & Hewitt 1988; Chapman & Joern 1990; Chopard 1951, p. 297; Defaut 1999, p. 49; Dreux 1961; Fischer et al. 1996; Foucart 1997; García & Presa 1981; Grayson & Hassall 1985; Haes & Harding 1997; Harz 1975, p. 884; Herrera 1982, p. 97 and 1985; Herrera & Larumbe 1996; Ingrisch 1995; La Greca 1985; Luquet 1978; Marshall & Haes 1988; Marty 1969; Monk 1985; Nagy 1983 and 1987; Naskrecki & Ünal 1995; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Preston-Mafham 1990; Ragge & Reynolds 1998, p. 406; Schmidt 1989; Telfer & Hassall 1999; Thorens 1984 and 1986 a; Ünal 2000; Voisin 1974; Wall & Begon 1987.

***Chorthippus biguttulus* (Linnaeus, 1758)**

Presence

18 grid squares (4.9 %).

Description

Body: 13 to 22 mm. This species belongs to the group of species called *biguttulus*. The group is made up of 3 very close species. *Ch. biguttulus*, *Ch. brunneus* and *Ch. mollis*. The best way to distinguish them in the wild is by their song, although there are some morphological differences that can help us to distinguish them. The length/width relation of the tegmina is 4 in the males and 5 in the females, which can be calculated from a photograph of the profile. The considerable width of the costal and subcostal areas of the males of this species allows it to be distinguished from *Ch. brunneus*, *Ch. mollis* and *Ch. jacobsi*, although this can only be done through comparison. In the males, the distance between the stigma and the margin of the tegmen divided by the full length of the tegmen, is less than 0.38, the same as in *Ch. mollis*.

Ecology

Present in: mountain meadow and subalpine meadow. Found above 1200 m (Encies, Odèn, Solsonès, UTM: 31TCG86) up to 1842 m (Pla de Beret, Naut Aran, UTM: 31TCH33, J. M. Roig coll.). Adults present from July to October.

Distribution

Pyrenees and Pre-Pyrenees. Europe and Asia.

Status

It belongs to the group of species called *biguttulus*, in addition to *Ch. brunneus* and *Ch. mollis*. *Ch. jacobsi*. Rare species.

Bibliography

Baccetti 1992; Bailey & Rentz 1990; Bellmann & Luquet 1995, p. 334; Bolívar 1876; Burgos & Herrera 1986; Chapman & Joern 1990; Chopard 1938, 1943, p. 273 and 1951, p. 298; Clemente et al. 1990 b; Defaut 1999, p. 51; Dreux 1961; Fischer et al. 1996; García & Presa 1981; González-García 1987; Harz 1975, p. 891; Herrera 1982, p. 98 and 1985; Herrera & Larumbe 1996; Ingrisch 1995; Isern-Vallverdú & Pardo 1990; Köhler et al. 1987; Nagy 1987; Naskrecki & Ünal 1995; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Presa et al. 1983; Preston-Mafham 1990; Prouteau & Robert 1973; Ragge & Reynolds 1988 and 1998, p. 401; Thorens 1984 and 1986 a; Ünal 2000.

Chorthippus mollis* (Charpentier, 1825)*Presence**

1 grid square (0.2 %).

Description

Body: 12 to 19 mm. This species belongs to the group of species called *biguttulus*. The group is made up of 3 very close species. *Ch. biguttulus*, *Ch. brunneus* and *Ch. mollis*. The best way to distinguish them in the wild is by their song, although there are some morphological differences that can help us to distinguish them. The length/width relation of the tegmina is the same as in *Ch. brunneus*, in other words, 4.8 in the males and 6 in the females, which can also be calculated from a photograph of the profile. Difficult to distinguish morphologically from *Ch. brunneus* and *Ch. biguttulus*. The costal area is wider than in *Ch. brunneus*, but less so than in *Ch. biguttulus*. In the males, the distance between the stigma and the margin of the tegmen divided by the full length of the tegmen, is less than 0.38, the same as in *Ch. biguttulus*.

Ecology

Present in: subalpine meadow. Found in a location at 1800 m (Prat de Jou, Planoles, UTM: 31TDG28). Adults present in December, a remarkable fact bearing in mind the altitude at which the specimens were found.

Distribution

Eastern Pyrenees. Europe and Asia.

Status

Synonymy: *Glyptobothrus mollis*. *Glyptobothrus* is considered to be a sub genus. Not very abundant species.

Bibliography

Antognoli & Zettel 1996; Baccetti 1954 and 1963; Bellmann & Luquet 1995, p. 330; Burgos & Herrera 1986; Chopard 1951, p. 298; Defaut 1999, p. 50; Dreux 1961; Fischer et al. 1996; Harz 1975, p. 880; Herrera 1982, p. 99 and 1985; Ingrisch 1995; La Greca 1985; Luquet 1978; Nagy 1983 and 1987; Naskrecki & Ünal 1995; Pardo et al. 1990; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Prouteau & Robert 1973; Ragge & Reynolds 1988, 1998, p. 413; Thorens 1984, 1986 a, 1991 a and b, 1993 and 1994.

***Chorthippus binotatus* (Charpentier, 1825)**

Presence

28 grid squares (7.6 %).

Description

Body: 16 to 29 mm. Posterior tibiae red with a pale mark near the base. Lateral carinae of the pronotum clear, edged in black, angled in the prozona and divergent in the metazona. Elytra very variable in shape and length, although usually they are shorter than the abdomen in both sexes.

Ecology

Present in: calcicolous rosemary scrub, kermes oak, mountain meadows. and subalpine meadow. Found above 4 m (Platja de la Marquesa, Deltebre, Baix Ebre, UTM: 31TCF11, J. Martí coll.) up to 1900 m (Collet de les Barraques, Planoles, Ripollès, UTM: 31TDG28). Adults present from June to October.

Distribution

Pyrenees, Pre-Pyrenees, Transversal mountain system, central high plateaux and basins, Coastal mountain system and Coastal area. Europe.

Status

Its systematic position has still not been resolved. Until now, there were many subspecies described in very diverse habitats. Synonymy: *Chorthippus binotatus saulcy* and *Stauroderus binotatus*. Not very abundant species.

Bibliography

Aguirre et al. 1987; Arcos & Pascual 1988; Barranco & Pascual 1991 and 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 51; Bolívar 1876; Burgos & Herrera 1986; Chopard 1938, 1943, p. 271 and 1951, p. 293; Clemente et al. 1990 b; Defaut 1999, p. 51; Gangwere et al. 1985; Garcia et al. 1984 and 1995; Gómez-Ladrón de Guevara et al. 1992; González-García 1987; Harz 1975, p. 898; Hernández et al. 1998; Herrera 1982, p. 99 and 1985; Herrera & Larumbe 1996; Isern-Vallverdú & Pardo 1990; Llorente 1980; Marty 1961 and 1969; Naskrecki & Ünal 1995; Pardo et al. 1991; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Pulido 1990; Ragge & Reynolds 1998, p. 435.

***Chorthippus apicalis* (Herrich-Schaeffer, 1840)**

Presence

16 grid squares (4.3 %).

Description

Body: 15 to 30 mm. Lateral carinae of the pronotum closer before the mid furrow, diverging in the metazona. Tegmina extending beyond the tip of the abdomen in males and slightly shorter than the abdomen in females. Wings darkened at the apex. In ventral view, the lower valves of the ovipositor have a margin with an incision.

Ecology

Present in: continental wilderness, cereal crops, fallow and cereal field margin. One of the few species that lives on cultivated cereals. Found above 214 m (Timoneda d'Alfès, Alfès, Segrià, UTM: 31TCG00) up to 413 m (Sanaija, Segarra, UTM: 31TCG63). Adults present from May to July.

Distribution

Central Depression and western sector of the central high plateaux and basins. Southern Europe and North Africa.

Status

Abundant species.

Bibliography

Arcos & Pascual 1988; Badih & Pascual 1998; Bolívar 1876; Chopard 1943, p. 272 and 1951, p. 295; Defaut 1999, p. 47; Gangwere et al. 1985; García & Presa 1981; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 901; Herrera 1982, p. 100 and 1985; Llorente 1980; Lock 1999; Marty 1961 and 1969; Morales - Agacino p. 32; Pardo et al. 1991; Pinedo & Llorente 1988; Presa & Monserrat 1978; Presa et al. 1983 and 1999; Pulido 1990; Ragge & Reynolds 1998, p. 439.

Chorthippus vagans (Eversman, 1840)

Presence

45 grid squares (12.2 %).

Description

Body: 12 to 22 mm. The lateral carinae of the white pronotum are globular in two black stripes. The opening to the tympanum is wide and oval, which distinguishes it from *Chorthippus* of the group *biguttulus*, in which the opening is a narrow cleft. The apex of the abdomen is orange in both sexes.

Ecology

Present in: Mediterranean pine forest, oak groves, holm-oak wood, jonquil meadows, grassy margins of damp woodland, false brome, savannah-type meadow, mountain meadows and subalpine meadow. Found above 30 m (Santa Cristina d'Aro, Baix Empordà, UTM: 31TDG92, J. Martí coll.) up to 1600 m (Santa Creu, Soriguera, Pallars Sobirà, UTM: 31TCG59). Adults present from February to December, which leads us to believe that the adults may hibernate in some areas depending on the severity of the winter.

Distribution

Pyrenees, Pre-Pyrenees, Transversal mountain system, central high plateaux and basins, Coastal mountain system and Coastal area. Europe, North Africa and Asia.

Status

Synonymy: *Gomphocerus vagans*. Not very abundant species.

Bibliography

Aguirre & Pascual 1988; Arcos & Pascual 1988; Badih & Pascual 1998; Barranco & Pascual 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 328; Bolívar 1876; Burgos & Herrera 1986; Chopard 1938 and 1951, p. 296; Clemente et al. 1990 b; Defaut 1999, p. 49; Eiroa & Novoa 1987; García et al. 1984; Gómez-Ladrón de Guevara et al. 1992; González-García 1987; Harz 1975, p. 877; Herrera 1982, p. 100 and 1985; Herrera & Larumbe 1996; Isern-Vallverdú & Pardo 1990; Luquet 1978; Marshall & Haes 1988; Martorell i Peña 1879; Marty 1969; Olmo-Vidal 2000 a, b and c; Olmo-Vidal & Llimona; Pardo et al. 1991 and 1993 b; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Presa et al. 1983 and 1999; Prouteau & Robert 1973; Pulido 1990; Ragge & Reynolds 1998, p. 395; Uvarov 1934.

Chorthippus dorsatus (Zetterstedt, 1821)

Presence

6 grid squares (1.6 %).

Description

Body: 14 to 26 mm. Lateral carinae of the pronotum almost parallel, slightly flexuous in the prozona. Tegmen of the males convex at the basal part. Apex of the abdomen of the male a reddish colour. Valves of the ovipositor elongated.

Ecology

Present in: heath, grassy margins of damp woodland, mountain meadows and subalpine meadow. Found above 560 m (Organyà, Alt Urgell, UTM: 31TCG67, MZB coll.) up to 1552 m (Bonabé, Alt Àneu, Pallars Sobirà, UTM: 31TCH43). Adults present from July to October.

Distribution

Central Pyrenees and Pre-Pyrenees. Europe, North Africa and Asia.

Status

In regression. Not very abundant species.

Bibliography

Antognoli & Zettel 1996; Baccetti 1954 and 1963; Bellmann & Luquet 1995, p. 340; Chopard 1938, 1943, p. 275 and 1951, p. 300; Defaut 1999, p. 48; Dreux 1961; Gangwere & Llorente 1992; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 906; Herrera 1982, p. 102 and 1985; Herrera & Larumbe 1996; Isern-Vallverdú 1990; La Greca 1985; Luquet 1978; Nagy 1983; Pardo et al. 1991; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Ragge & Reynolds 1998, p. 447; Schmidt 1989; Uvarov 1934.

Chorthippus parallelus* (Zetterstedt, 1821)*Presence**

33 grid squares (9.0 %).

Description

Body: 14 to 23 mm. Pronotum with the lateral carinae almost parallel, slightly flexuous. Tegmina of the male short without covering the whole abdomen, much shorter in the female where they reach the third abdominal tergite. Transparent wings, much shorter than the tegmina. Short ovipositor valves. There are specimens with well-developed wings (macropterous).

Ecology

Present in: box scrub, grassy margins of damp woodland, mountain meadows, Alpine and subalpine meadow, and damp meadow of the Empordà plain. Found above 75 m (Vilaüt, Pau, Alt Empordà, UTM: 31TEG08) up to 1842 m (Pla de Beret, Naut Aran, UTM: 31TCH33). Adults present from July to November.

Distribution

Pyrenees, Pre-Pyrenees, Empordà plains and Transversal mountain system. Europe and Asia.

Status

Synonymy: *Chorthippus longicornis* and *Gomphocerus parallelus*. Very abundant species.

Bibliography

Antognoli & Zettel 1996; Arcos & Pascual 1988; Aznarez 1972; Baccetti 1963; Barranco & Pascual 1991 and 1993; Bellmann & Luquet 1995, p. 342; Berne & Chapman 1970 a and b; Burgos & Herrera 1986; Chapman & Joern 1990; Chopard 1951, p. 300; Clemente et al. 1990 b; Defaut 1999, p. 47; Dreux 1961; Fischer et al. 1996; Gómez-Ladrón de Guevara et al. 1992; González-García 1987; Guerrucci & Voisin 1988; Gyllenberg 1974; Haes & Harding 1997; Harz 1975, p. 911; Herrera 1982, p. 103 and 1985; Hewitt 1990; Isern-Vallverdú 1990; Isern-Vallverdú & Pardo 1990; Köhler et al. 1987 and 2000; La Greca 1975 and 1985; La Greca & Messina 1975; Luquet 1978; Marshall & Haes 1988; Martorell i Peña 1879; Marty 1961 and 1969; Monk 1985; Nagy 1983 and 1987; Pardo et al. 1991; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Presa et al. 1983 and 1999; Prouteau & Robert 1973; Ragge & Reynolds 1998, p. 452; Reynolds 1980; Ritchie et al. 1987; Schmidt 1989; Szijj 1992; Thorens 1984 and 1986 a; Únal 2000; Uvarov 1934; Voisin 1990.

Chorthippus jucundus* (Fischer, 1853)*Presence**

20 grid squares (5.4 %).

Description

Body: 20 to 31 mm. Long antennae. Usually green with the posterior tibiae and tarsi red. Lateral carinae of the pronotum very straight and parallel with the typical furrow in the middle. Subgenital plate of the male conical and elongated. Ovipositor valves short.

Ecology

Present in: grassy margins of damp woodland, mountain meadows, rushes and riverside grassland. Found above 8 m (Calella, Maresme, UTM: 31TDG70, MZB coll.) up to 1500 m (Les Espalloses, Alp, Cerdanya, UTM: 31TDG19). Adults present from July to September.

Distribution

Pyrenees, Central Pre-Pyrenees, central high plateaux and basins, Coastal mountain system, Coastal area. Southern Europe and North Africa.

Status

In regression. Synonymy: *Gomphocerus jucundus*. Not very abundant species.

Bibliography

Arcos & Pascual 1988; Barranco & Pascual 1991 and 1993; Beiro et al. 1998; Bolívar 1876; Burgos & Herrera 1986; Chopard 1943, p. 274 and 1951, p. 299; Clemente et al. 1990 b; Defaut 1999, p. 48; Eiroa & Novoa 1987; García & Presa 1981; Gómez-Ladrón de Guevara et al. 1992; González-García 1987; Harz 1975, p. 904; Herrera 1982, p. 104 and 1985; Herrera & Larumbe 1996; López-Fernández et al. 1984; Martorell i Peña 1879; Marty 1969; Morales - Agacino p. 34; Pardo et al. 1991 and 1993 b; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Presa et al. 1983 and 1999; Ragge & Reynolds 1998, p. 441.

Chorthippus jacobsi* Harz, 1975*Presence**

87 grid squares (23.7 %).

Description

Body: 15 to 19 mm. In males, the distance between the stigma and the apex is less than 0.38 in the tegmina, the same as in *Ch. brunneus*, species from which it is very difficult to distinguish, apart from its song. By contrast, a morphological feature that is fairly constant in the males is the number of teeth in the stridulatory row of the inner face of the posterior femora, which in *Ch. jacobsi* is more than 90 teeth, whereas in *Ch. brunneus* it is greater than this. The females of *Ch. jacobsi* have more than 85 teeth in the stridulatory row of the posterior femur.

Ecology

Present in: Mediterranean pine forest, calcicolous rosemary scrub, siliceous rockrose scrub and heath, jonquil meadows, savannah-type meadows, dry fields of false brome, small meadow, continental wilderness, cultivated land, fallow and cereal field margins. Found above 25 m (Vilanova i la Geltrú, Garraf, UTM: 31TCF96) up to 1600 m (Santa Creu, Soriguera, Pallars Sobirà, UTM: 31TCG59). There are two generations a year. Adults present from April to November.

Distribution

Pre-Pyrenees, Empordà plains, Transversal mountain system, central high plateaux and basins, Central depression, Coastal mountain system and Coastal area. Iberian Peninsula.

Status

Abundant species.

Bibliography

Barranco & Pascual 1991 and 1993; Beiro et al. 1998; Clemente et al. 1990 b; Defaut 1999, p. 50; Gangwere & Llorente 1992; Gangwere & Spiller 1995; Gangwere et al. 1985; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 890; Hernández et al. 1998; Herrera 1982, p. 102; Herrera & Larumbe 1996; Isern-Vallverdú & Pardo 1990; Lock 1999; Olmo-Vidal 2000 a and c and 2001 a; Olmo-Vidal & Llimona 2000; Pardo et al. 1990 and 1993 b; Presa et al. 1999; Pulido 1990; Ragge & Reynolds 1988 and 1998, p. 420.

***Euchorthippus pulvinatus* (Fischer Waldheim, 1846)**

Presence

90 grid squares (24.5 %).

Description

Body: 15 to 28 mm. Conical head and lateral carinae of the pronotum straight and parallel. The tegmina of the male reach the knees (genicular lobes) of the posterior femora and half way along the femurs in females. Subgenital plate of the male elongated. The last segments of the antennae in the male are pale coloured and the antennae are proportionally long. This feature is very useful in the field for distinguishing the males of *E. pulvinatus* from *E. chopardi*, without the need to catch the specimens. The males of *E. chopardi* do not have antennae with the last segment so pale and the antennae are proportionally shorter than in *E. pulvinatus*.

Ecology

Present in: calcicolous rosemary scrub, siliceous rockrose scrub and heath, kermes oak, jonquil meadows, cultivated land, riverside grassland, fallow and cereal field margin. Found above 6 m (Prat de Llobregat, Baix Llobregat, UTM: 31TDF27) up to 1180 m (Perves, El Pont de Suert, UTM: 31TCG29). Found in some habitats with *Euchorthippus chopardi*. Adults present from June to November.

Distribution

Pyrenees, Pre-Pyrenees, Transversal mountain system, central high plateaux and basins, Central Depression, Coastal mountain system and coastal area. Europe and Asia.

Status

Abundant species.

Bibliography

Alonso & Herrera 1982; Arcos & Pascual 1988; Baccetti 1992; Barranco & Pascual 1991; Beiro et al. 1998; Bellmann & Luquet 1995, p. 346; Burgos & Herrera 1986; Chopard 1951, p. 303; Clemente et al. 1990 b; Cuní i Martorell 1887; Defaut 1999, p. 52; Descamps 1968; Eiroa & Novoa 1987; Foucart 1997; García & Presa 1981; García et al. 1984; Gómez-Ladrón de Guevara et al. 1992; González-García 1987; Haes & Harding 1997; Harz 1975, p. 921; Herrera 1982, p. 104 and 1985; Isern-Vallverdú & Pardo 1990; Marshall & Haes 1988; Marty 1969; Nagy 1987; Olmo 1990; Olmo-Vidal 2000 a and c; Pardo et al. 1990, 1991 and 1993 b; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Presa & Monserrat 1978; Presa et al. 1983 and 1999; Pulido 1990; Rague & Reynolds 1984 and 1998, p. 465; Únal 2000; Uvarov 1934.

***Euchorthippus declivus* (Brisout-Barnville, 1848)**

Presence

1 grid square (0.2 %).

Description

Body: 14 to 25 mm. Conical head and lateral carinae of the pronotum straight and parallel. The tegmina of the male do not reach the knees (genicular lobes) of the posterior femora and reach half way along the femurs in the females. Subgenital plate of the male very elongated and pointed.

Ecology

Up until now, had only been found in the Val d'Aran. No information on height, period of appearance and type of habitat.

Distribution

Central Pyrenees. Europe.

Status

Cited for the first time in Catalonia. In regression. Synonymy: *Gomphocerus declivus*. Rare species.

Bibliography

Baccetti 1963; Bellmann & Luquet 1995, p. 349; Chopard 1951, p. 303; Clemente et al. 1990 b; Defaut 1999, p. 52; Descamps 1968; Dreux 1961; Harz 1975, p. 924; Herrera 1982, p. 105 and 1985; Isern-Vallverdú & Pardo 1990; Martorell i Peña 1879; Marty 1969; Mossot & Ewald 1994; Nagy 1983 and 1987; Pardo et al. 1991; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Prouteau & Robert 1973; Ragge & Reynolds 1984 and 1998, p. 463; Schmidt 1989;

Euchorthippus chopardi* (Descamps, 1931)*Presence**

76 grid squares (20.7 %).

Description

Body: 14 to 22 mm. Conical head and lateral carinae of the pronotum straight and parallel. The tegmina of the male extend beyond the knees (genicular lobes) of the posterior femora and reach half way along the femurs in the females. Subgenital plate of the male not elongated. No need to capture the specimen, the male of *E. chopardi* does not have antennae with very pale final segment and the antennae are proportionally shorter than in *E. pulvinatus*.

Ecology

Present in: maquis, calcicolous rosemary scrub, siliceous rockrose scrub and heath, savannah-type meadow, dry field of false brome, small meadow and continental wilderness. Species dominant in areas with (*Brachypodium retusum*), for example in the lower part of the savannah-type meadows of *Hyparrhenia hirta*. Found above 10 m (Cala Santes Creus, L'Ametlla de Mar, Baix Ebre, UTM: 31TCF12) up to 950 m (Montllobat, Tremp, Pallars Jussà, UTM: 31TCG16). Adults present from June to November.

Distribution

Empordà plains, central high plateaux and basins, Central depression, Coastal mountain system and Coastal area. Iberian Peninsula and Southern France.

Status

Abundant species.

Bibliography

Aguirre & Pascual 1988; Alonso & Herrera 1982; Arcos & Pascual 1988; Beiro et al. 1998; Bellmann & Luquet 1995, p. 352; Defaut 1999, p. 53; Descamps 1968; Foucart 1997; Garcia et al. 1984; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 925; Hernández et al. 1998; Herrera 1982, p. 105 and 1985; Olmo-Vidal 2000 a, b, c and 2001 a; Olmo-Vidal & Llimona 2000; Pardo et al. 1990 and 1993 b; Pascual 1978 a, b, c and d; Presa et al. 1999; Pulido 1990; Ragge & Reynolds 1984 and 1998, p. 469.

Stenobothrus lineatus* (Panzer, 1796)*Presence**

34 grid squares (9.2 %).

Description

Body: 16 to 24 mm. Lateral carinae of the pronotum slightly flexuous in the prozona and divergent in the metazona. Median carina of the pronotum marked all along its length. Prozona and metazona of the same length. Subgenital plate of the male very elongated and conical. Elongated, white, stigmatic mark after the middle of the tegmen. Radial area sinuous and intercalary area dark. No cubital area. Dark wings at the apex. Ovipositor valves with a small basal tooth, a characteristic feature of the genus *Stenobothrus*.

Ecology

Present in: heath, box scrub, grassy margins of damp woodland, mountain meadows and subalpine meadow. Found above 843 m (El Brull, Osona, UTM: 31TDG43, J. Muñoz coll.) up to 1842 m (Pla de Beret, Naut Aran, UTM: 31TCH33, J. M. Roig coll.). Adults present from July to September.

Distribution

Pyrenees, Pre-Pyrenees and Transversal mountain system. Europe and Asia.

Status

Synonymy: *Gomphocerus lineatus*. Not very abundant species.

Bibliography

Antognoli & Zettel 1996; Aznarez 1972; Baccetti 1954 and 1963; Bellmann & Luquet 1995, p. 290; Bolívar 1876; Burgos & Herrera 1986; Chapman & Joern 1990; Chopard 1951, p. 275; Clemente et al. 1989 a, b and 1990 a and b; Defaut 1999, p. 45; Dreux 1961; Fischer et al. 1996; Haes & Harding 1997; Harz 1975, p. 759; Herrera 1982, p. 106 and 1985; Isern-Vallverdú & Pardo 1990; Isern-Vallverdú 1990; La Greca 1975 and 1985; Luquet 1978; Marshall & Haes 1988; Martorell i Peña 1879; Marty 1961 and 1969; Nagy 1987; Navás 1929; Ponel & Hebrard 1988; Preston-Mafham 1990; Prouteau & Robert 1973; Ragge & Reynolds 1998, p. 333; Thorens 1984 and 1986 a; Schmidt 1989; Ünal 2000; Uvarov 1934.

Stenobothrus stigmaticus* (Rambur, 1838)*Presence**

16 grid squares (4.3 %).

Description

Body: 11 to 20 mm. Lateral carinae of the pronotum almost parallel, slightly flexuous in the prozona. Cubital area reaches the height of the stigma. Stigmatic mark very close to the apex. Tegmina just reach the tip of the abdomen in the males and are slightly shorter than the abdomen in the females. Radial area not fusiform. In the males, the last abdominal tergite has a rounded, not very wide incision, which is found at the base of the supra-anal shield, which is triangular. Ovipositor valves with a small basal tooth, a characteristic feature of the genus *Stenobothrus*.

Ecology

Present in: heath, mountain meadows and subalpine meadow. Found above 1031 m (Estany de Montcortès, Baix Pallars, Pallars Sobirà, UTM: 31TCG39) up to 2080 m (Coll de Pal, Bagà, Berguedà, UTM: 31TDG08). Adults present from July to September.

Distribution

Central and Eastern Pyrenees in two separate nuclei and Central Pre-Pyrenees. Europe and Asia.

Status

Synonymy: *Gomphocerus stigmaticus*. Abundant species.

Bibliography

Aznarez 1972; Bellmann & Luquet 1995, p. 296; Bolívar 1876; Burgos & Herrera 1986; Chopard 1951, p. 277; Clemente et al. 1989 a, b and 1990 a, b; Defaut 1978 and 1999, p. 44; González-García 1987; Haes & Harding 1997; Harz 1975, p. 768; Herrera 1982, p. 106 and 1985; Isern-Vallverdú 1990; Isern-Vallverdú & Pardo 1990; Isern-Vallverdú et al. 1995; Marshall & Haes 1988; Martorell i Peña 1879; Marty 1961 and 1969; Nagy 1983 and 1987; Pinedo & Llorente 1988; Presa et al. 1983 and 1999; Prouteau & Robert 1973; Ragge & Reynolds 1998, p. 344.

Stenobothrus nigromaculatus* (Herrich-Schaffer, 1840)*Presence**

14 grid squares (3.8 %).

Description

Body: 15 to 24 mm. Antennae of the male slightly wider at the apex. Lateral carinae of the pronotum almost parallel, slightly flexuous. Tegmina just reach the tip of the abdomen in the males and are much shorter in the females. Costal area broader than the subcostal area. Cubital area very narrow, ending before the stigma. Stigmatic mark round, very close to the apex at the fourth apical. Ovipositor valves with a small basal tooth, a characteristic feature of the genus *Stenobothrus*.

Ecology

Present in: Lives in Alpine and subalpine meadow. Found above 1100 m (Torrent del Ridulaina, Bellver de Cerdanya, UTM: 31TCG98, UB coll.) up to 2800 m (Pas dels Lladres, Puigmal, Queralbs, Ripollès, UTM: 31TDG29). Adults present from August to September.

Distribution

Pyrenees. Europe and Asia.

Status

Abundant species.

Bibliography

Aznarez 1972; Bellmann & Luquet 1995, p. 294; Bolívar 1876; Chopard 1951, p. 277; Clemente et al. 1989 a, b and 1990 a, b; Defaut 1999, p. 45; Dreux 1961; Fischer et al. 1996; Harz 1975, p. 761; Herrera 1982, p. 107 and 1985; Isern-Vallverdú & Pardo 1990; Isern-Vallverdú 1990; Isern-Vallverdú et al. 1995; La Greca 1975 and 1985; Marty 1961 and 1969; Mossot & Ewald 1994; Nagy 1983 and 1987; Pinedo & Llorente 1988; Ragge & Reynolds 1998, p. 334; Uvarov 1934.

Stenobothrus fischeri* (Eversmann, 1848)*Presence**

1 grid square (0.2 %).

Description

Body: 18 to 26 mm. Lateral carinae of the pronotum almost parallel. Tegmina just reach the tip of the abdomen in the males and are much shorter in the females. In the females, the costal area is narrower than the subcostal area, and the subcostal area is broader than the radial area. Cubital area very narrow, ending before the stigma. Stigmatic mark just after the middle of the tegmen. Ovipositor valves with a small basal tooth, a characteristic feature of the genus *Stenobothrus*.

Ecology

Present in: dry thorny scrub. Found in a single location at 1100 m (Lo Portell, El Ports, Tortosa, Baix Ebre, UTM: 31T BF72). Adults present in June.

Distribution

Southern tip of the Coastal mountain system (Ports de Beceit). Southern Europe and Asia.

Status

Rare species.

Bibliography

Aznarez 1972; Bellmann & Luquet 1995, p. 292; Burgos & Herrera 1986; Chopard 1951, p. 279; Clemente et al. 1988, 1989 a, b and 1990; Defaut 1999, p. 44; Dreux 1961; Harz 1975, p. 760; Herrera 1982, p. 107 and 1985; Luquet 1978; Marty 1961; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Ragge & Reynolds 1998, p. 337; Ünal 2000; Uvarov 1934.

Stenobothrus festivus* (Bolívar, 1887)*Presence**

4 grid squares (1.0 %).

Description

Body: 14 to 21 mm. Lateral carinae of the pronotum very flexuous and X-shaped. Well-developed tegmina. Radial area of a more or less constant width and not fusiform, starting at the base of the tegmen, but narrower than the subcostal area. The cubital area ends before the stigma. Stigmatic mark on the third apical. Ovipositor valves with a small basal tooth, a characteristic feature of the genus *Stenobothrus*.

Ecology

Present in: thyme bushes and continental wilderness. Found above 214 m (Timoneda d'Alfès, Alfès, Segrià, UTM: 31TCG00) up to 290 m (Los Ermitans, Menàrguens, UTM: 31TCG12). Adults present from May to June.

Distribution

Central depression. Iberian Peninsula and South of France.

Status

Rare species.

Bibliography

Arcos & Pascual 1988; Aznarez 1972; Bellmann & Luquet 1995, p. 76; Bolívar 1887; Chopard 1951, p. 279; Clemente et al. 1989 a, b and 1990; Defaut 1999, p. 44; Foucart 1997; García & Presa 1981; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 758; Herrera 1982, p. 108 and 1985; Pardo 1993 b; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Presa et al. 1999; Pulido 1990; Ragge & Reynolds 1998, p. 340.

Stenobothrus grammicus* (Cazurro, 1888)*Presence**

3 grid squares (0.8 %).

Description

Body: 17 to 25 mm. Last segment of the maxillary and labial palpi black. Antennae widening at the apex, particularly in the male. Lateral carinae of the pronotum very flexuous and X-shaped. Well-developed tegmina. Radial area starting half way along the tegmen in a fusiform shape. The cubital area extends beyond the stigma. Stigmatic mark on the third apical. Ovipositor valves with a small basal tooth, a characteristic feature of the genus *Stenobothrus*.

Ecology

Present in: thicket, calcicolous rosemary scrub and dry thorny scrub. Found above 463 m (Os de Balaguer, Noguera, UTM: 31TCG03) up to 1100 m (Lo Portell, El Ports, Tortosa, Baix Ebre, UTM: 31T BF72). Adults present from June to July.

Distribution

Central Depression and southern tip of the coastal mountain system (Ports de Beceit). Iberian Peninsula and South of France.

Status

Rare species.

Bibliography

Bellmann & Luquet 1995, p. 286; Burgos & Herrera 1986; Cazurro 1888; Chopard 1951, p. 279; Clemente et al. 1989 a, b and 1990; Defaut 1999, p. 44; Dreux 1961; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 755; Herrera 1982, p. 108 and 1985; Luquet 1978; Marty 1969; Navás 1929; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Presa et al. 1999; Pulido 1990; Ragge & Reynolds 1998, p. 343.

Omocestus haemorrhoidalis* (Charpentier, 1825)*Presence**

16 grid squares (4.3 %).

Description

Body: 10 to 19 mm. In the genus *Omocestus* and the genus *Stenobothrus* the front margin of the tegmen does not have a basal lobe, unlike the genus *Chorthippus*, which does. In *O. haemorrhoidalis* the maxillary and mandibular palpi are a uniform colour. Carinae of the pronotum angled, forming almost a right angle in the prozona and diverging in the metazona. Short ovipositor valves. Stigmatic mark rounded, not very marked. The tegmina in repose reach the posterior genicular lobes. The subcostal area

is broader than the costal area and the same width as the radial area. Wings not darkened. Species similar to *O. raymondi*.

Ecology

Present in: heath, alpine and sub-alpine meadow. Found above 1050 m (Santa Fe de Montseny, Fogars de Montclús, Vallès Oriental, UTM: 31TDG52, MZB coll.) up to 1842 m (Pla de Beret, Naut Aran, Val d'Aran, UTM: 31TCH33, J. M. Roig coll.). Adults present from July to September.

Distribution

Pyrenees. Europe and Asia.

Status

Synonymy: *Dirshius haemorrhoidalis*. Not very abundant species.

Bibliography

Antognoli & Zettel 1996; Bellmann & Luquet 1995, p. 302; Bolívar 1876; Burgos & Herrera 1986; Chopard 1951, p. 284; Clemente et al. 1989 a and 1990; Defaut 1999, p. 43; Fischer et al. 1996; Gangwere et al. 1985; García & Presa 1981; Harz 1975, p. 711; Herrera 1982, p. 108 and 1985; Isern-Vallverdú 1990; Isern-Vallverdú & Pardo 1990; Isern-Vallverdú et al. 1995; La Greca 1975 and 1985; Marty 1969; Nagy 1983 and 1987; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Prouteau & Robert 1973; Ragge & Reynolds 1998, p. 309; Schmidt 1989; Thorens 1984 and 1986 a; Ünal 2000; Voisin 1979.

***Omocestus raymondi* (Yersin, 1863)**

Presence

47 grid squares (12.8 %).

Description

Body: 11 to 22 mm. Maxillary and mandibular palpi of a uniform colour. Carinae of the pronotum flexuous. Short ovipositor valves. Stigmatic mark towards the fourth apical. The tegmina in repose extending beyond the posterior genicular lobes in both sexes. The wings are very dark in comparison with the rest of the species of the genus. Apart from the features described, the male of this species can be distinguished in the field by lightly pressing the tip of the abdomen, which will uncover the penis, shaped like a hook as a result of the presence of the lower valves that are much longer than the upper ones, unlike the rest of the species in which this feature is not so marked. Species very similar to *O. haemorrhoidalis*.

Ecology

Present in: Mediterranean pine forest, calcicolous rosemary scrub, siliceous rockrose scrub and heath, thicket, false brome and savannah-type meadow. Found above 5 m (L'Estartit, Torroella de Montgrí, Baix Empordà, UTM: 31TEG15) up to 948 m (Esterri d'Àneu, Pallars Sobirà, UTM: 31TCH42). Judging by the capture data, there are probably two generations, with the adults hibernating. Adults present from February to November.

Distribution

Central Pyrenees, Central Pre-Pyrenees, Empordà plains, Central Depression, coastal mountain system and coastal area. Southern Europe and North Africa.

Status

Synonymy: *Dirshius raymondi*. Not very abundant species.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Alonso & Herrera 1982; Arcos & Pascual 1988; Baccetti et al. 1995; Badih & Pascual 1998; Barranco & Pascual 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 306; Bolívar 1876; Chopard 1943, p. 268 and 1951, p. 285; Clemente et al. 1989 a and 1990; Defaut 1999, p. 43; Foucart 1997; García & Presa 1981; Garcia et al. 1984; Gómez-Ladrón de Guevara et al. 1992; González-García 1987; Harz 1975, p. 713; Hernández et al. 1998; Herrera 1982, p. 109 and 1985; La Greca 1994; Lock 1999; Luquet 1978; Olmo-Vidal 2000 a, b and c; Olmo-Vidal & Llimona 2000; Pascual 1975; Presa & Monserrat 1978; Presa et al. 1999; Ragge & Reynolds 1998, p. 315.

***Omocestus burri* (Uvarov, 1936)**

Presence

15 grid squares (4.0 %).

Description

Body: 8.9 to 13 mm. Head large in proportion to the pronotum. Prozona broader than the metazona. Median carina of the pronotum marked. Lateral carinae flexuous. Shortened tegmina, in the females the tegmina reach, at the most, two thirds of the way along the posterior femur. Costal and subcostal areas of a similar width. Stigmatic mark very close to the apex. Posterior tibiae a pale blackish-brown colour.

Ecology

Present in: calcicolous rosemary scrub and thicket. Found above 200 m (Campdàsens, Sitges, Garraf, UTM: 31TDF06) up to 1500 m (Coll d'Ager, Ager, Noguera, UTM: 31TCG15). Adults present from June to November.

Distribution

Central Pre-Pyrenees, central high plateaux and basins (western sector) and the central part of the coastal mountain system. Iberian Peninsula.

Status

Synonymy: *Dirshius burri*. Not very abundant species.

Bibliography

Barranco & Pascual 1991; Clemente et al. 1986, 1989 a and 1990; Gangwere et al. 1985; García & Presa 1981; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 717; Herrera 1982, p. 110; Olmo-Vidal 2000 c; Pardo et al. 1990 and 1993 b; Presa et al. 1999.

***Omocestus viridulus* (Linnaeus, 1758)**

Presence

10 grid squares (2.7 %).

Description

Body: 13 to 24 mm. Similar colouring in both sexes. Upper part of the vertex with a small median carina. Lateral carinae of the pronotum not very flexuous and prozona seen in profile is slightly raised. Supra-anal shield of the males with very thick, black margins. The female is clearly differentiated from the rest of the species of the genus by the great length of the ovipositor valves. Well-developed wings and tegmina. Species similar to *O. rufipes*, however, in the latter species, the palpi are white, amongst other differences.

Ecology

Present in: Swath meadow, alpine and sub-alpine meadow. Found above 940 m (La Guingueta d'Àneu, Pallars Sobirà, UTM: 31TCH41) up to 1842 m (Pla de Beret, Naut Aran, UTM: 31TCH33). Adults present from July to September.

Distribution

Pyrenees. Europe and Asia.

Status

Not very abundant species.

Bibliography

Bellmann & Luquet 1995, p. 310; Bolívar 1876; Burgos & Herrera 1986; Chapman & Joern 1990; Chopard 1951, p. 283; Clemente et al. 1989 a, 1990 a and b; Defaut 1978 and 1999, p. 43; Dreux 1961; Haes & Harding 1997; Harz 1975, p. 727; Herrera 1982, p. 110 and 1985; La Greca 1985; Marshall & Haes 1988; Marty 1969; Morales - Agacino 1942, p. 30; Pinedo & Llorente 1988; Ragge & Reynolds 1998, p. 304.

***Omocestus rufipes* (Zetterstedt, 1821)**

Presence

64 grid squares (17.4 %).

Description

Body: 12 to 20 mm. The colouring in the males is dark brown with the posterior legs and the tip of the abdomen reddish and the females are green with the front part of the elytra and lateral part of the body brown. Tip of the maxillary palpi white, very noticeable. Lateral carinae of the pronotum white, parallel to the prozona and only diverging slightly in the metazona. Males with the subcostal vein sinuous until it ends in the middle of the tegmen with a white stigmatic mark. Dark wings.

Ecology

Present in: jonquil meadows, grassy margins of damp woodland, mountain meadows, rushes and riverside grassland. Found above 6 m (El Prat de Llobregat, Baix Llobregat, UTM: 31TDF27) up to 1229 m (Pardines, Ripollès, UTM: 31TDG38). Adults present from May to October.

Distribution

Throughout Catalonia. Europe and Asia.

Status

Synonymy: *Omocestus ventralis*. Not very abundant species.

Bibliography

Alonso & Herrera 1982; Antognoli & Zettel 1996; Baccetti 1963; Bellmann & Luquet 1995, p. 308; Bolívar 1876; Burgos & Herrera 1986; Chopard 1938, 1943, p. 268 and 1951, p. 283; Clemente et al. 1989 a, 1990 a and b; Coin 1993; Cuni i Martorell 1887; Defaut 1999, p. 42; Dreux 1961; Eiriksson 1992; Eiroa & Novoa 1987; Foucart 1997; Gangwere & Llorente 1992; Gangwere & Spiller 1995; Haes & Harding 1997; Harz 1975, p. 724; Herrera 1982, p. 110 and 1985; Isern-Vallverdú & Pardo 1990; La Greca 1985; Marshall & Haes 1988; Martorell i Peña 1879; Marty 1961 and 1969; Morales - Agacino 1942, p. 30; Nagy 1983 and 1987; Navás 1910 and 1929; Olmo 1990; Olmo-Vidal 2000 c; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Ragge & Reynolds 1998, p. 305; Schmidt 1989; Szijj 1992; Thorens 1984 and 1986 a; Únal 2000; Uvarov 1934.

***Omocestus antigai* (Bolívar, 1897)**

Presence

10 grid squares (2.7 %).

Description

Body: 12 to 22 mm. Pronotum with the median carina well marked. The tegmina of the male in repose, reach no further than the base of the posterior genicular lobes. Stigmatic mark on the third apical. In the males, the costal area of the tegmen is twice the width of the subcostal area. Front femur and tibiae hairy. Ventral valves of the ovipositor long and, in ventral view, the basal part is the same length as the apical, which suddenly narrows, creating a step. Some specimens have this step very marked, which led to the description of the species *Stenobothrus broelemanni*, although it was later seen that it was, in fact, the same species.

Ecology

Present in: heath, alpine and sub-alpine meadow. Found above 1400 m (Montllobar, Montseny, UTM: 31TDG52) up to 2500 m (Coma de l'Embut, Núria, Ripollès, UTM: 31TDG29). Adults present from August to September.

Distribution

Eastern Pyrenees and Transversal mountain system. Iberian Peninsula.

Status

Synonymy: *Stenobothrus broelemanni*. Not very abundant species.

Bibliography

Clemente et al. 1989 a, 1990 a, b and 1999; Defaut 1999, p. 44; Gangwere et al. 1985; Harz 1975, p. 730; Herrera 1982, p. 112; Morales - Agacino 1942, p. 31; Ragge & Reynolds 1998, p. 319; Reynolds 1986.

Omocestus navasi* (Bolívar, 1908)*Presence**

1 grid square (0.2 %).

Description

Body: 15 to 26 mm. Lateral carinae of the pronotum form an obtuse angle, well marked in the middle of the prozona. The elytra of the male in repose reach no further than the base of the posterior genicular lobes. Stigmatic mark on the third apical. Ventral valves of the ovipositor with the basal part shorter than the apical and without forming much of a step, in ventral view. It is a species that is very similar to *O. antigai*, however, the main difference is the habitat it occupies. *O. navasi* lives at lower altitudes than *O. antigai*. Morphologically, in *O. navasi* the lateral carinae of the pronotum are notably angled in the prozona and in *O. antigai* they are flexuous but without forming a marked angle. The head is much higher and globular in *O. navasi* than in *O. antigai*.

Ecology

Present in: box scrub. Found in a single location at 1400 m (Solana de la Cercua, Corroncui, El Pont de Suert, Alta Ribagorça, UTM: 31TCG29). Species very similar, morphologically, to *O. antigai*, from which it is separated due to its ecology. *O. navasi* has never been found in Alpine meadows, it is always present in lower areas. Adults present in September.

Distribution

Central Pre-Pyrenees. Iberian Peninsula. Pre-Pyrenees of Huesca and Lleida.

Status

Rare species.

Bibliography

Bolívar 1908; Clemente et al. 1989 a, 1990 a, b and 1999; Gangwere et al. 1985; Harz 1975, p. 731; Herrera 1982, p. 112; Isern-Vallverdú & Pardo 1990; Morales - Agacino 1942, p. 31; Reynolds 1986.

Gomphocerus sibiricus* (Linnaeus, 1767)*Presence**

9 grid squares (2.4 %).

Description

Body: 18 to 25 mm. Antennae widening at the apex, particularly in the males. Humped pronotum. Tegmina with a costal lobe, as in the genus *Chorthippus* and with a broad mid area. In the males, the tegmina reach the tip of the abdomen and in the females they are shorter. The male has very swollen front tibiae.

Ecology

Present in: alpine and sub-alpine meadow. Lives in Alpine meadows. Found above 1872 m (Coll de Coma Ermada, Planoles, Ripollès, UTM: 31TDG28) up to 2100 m (Llac de Monastero, Espot, UTM: 31TCH31, J. Barat coll.). Adults present from July to September.

Distribution

Central and Eastern Pyrenees, in two separate nuclei. Europe and Asia.

Status

In regression in the Alps. Synonymy: *Aeropus sibiricus*. Several subspecies have been described, in Iberian Peninsula *G. sibiricus hispanicus* (Sierra de Guadarrama) and *G. sibiricus pyrenaicus* (Pyrenees) can be found. Not very abundant species.

Bibliography

Aznarez 1972; Bellmann & Luquet 1995, p. 312; Bolívar 1876; Chopard 1938 and 1951, p. 307; Clemente et al. 1990 b; Defaut 1999, p. 46; Dreux 1961; Gangwere et al. 1985; Gueguen-Genest & Gueguen 1987; Harz 1975, p. 784; Herrera 1982, p. 113 and 1985; Herrera & Larumbe 1996; Ingrisch 1995 b and 1996; Isern-Vallverdú 1990; Isern-Vallverdú & Pardo 1990; La Greca 1975 and 1985; La Greca & Messina, 1982; López-Fernández et al. 1984; Marty 1961 and 1969; Morales - Agacino 1942, p. 35; Preston-Mafham 1990; Ragge & Reynolds 1998, p. 367; Uvarov 1931.

Gomphoceridius brevipennis* (Brissout, 1858)*Presence**

8 grid squares (2.1 %).

Description

Body: 13 to 21 mm. Colouring varies from green to brown. Antennae widening at the apex. Pronotum with parallel lateral carinae in the prozona, diverging slightly in the metazona. Elytra very short, lobiform, not extending more than half way up the abdomen in males and the second abdominal tergite in females. Subgenital plate of the male curved upwards. Long ovipositor valves. The females are similar to *Omocestus antigai*, however, the antennae are shorter in *G. brevipennis* as are the elytra.

Ecology

Present in: Alpine meadow. Found above 2080 m (Coll de Pal, Bagà, Berguedà, UTM: 31TDG08) up to 2500 m (Coma de l'Embut, Núria, Queralbs, Ripollès, UTM: 31TDG29). Adults present from August to November.

Distribution

Pyrenees.

Status

Rare species.

Bibliography

Bellmann & Luquet 1995, p. 318; Bolívar 1876; Chopard 1951, p. 308; Clemente et al. 1990 b; Defaut 1999, p. 46; Harz 1975, p. 798; Herrera 1982, p. 114; Marty 1961 and 1969; Morales - Agacino 1942, p. 36.

Myrmeleotettix maculatus* (Thunberg, 1815)*Presence**

10 grid squares (2.7 %).

Description

Body: 11 to 16 mm. Varying in colour, in the males, the tip of the abdomen is reddish-orange. Antennae broader at the tip, particularly in males. Lateral carinae of the pronotum angled. Tegmina with the costal margin without lobes, as in the genus *Omocestus*, and the mid area broad with dark marks. Very marked, white, stigmatic mark. Wings a little darker at the apex. Posterior tibiae yellowish. The females can be confused with *Omocestus hemorrhoidalis*.

Ecology

Present in: alpine and sub-alpine meadow. Found above 1706 m (Turó de l'Home, Fogars de Montclús, Vallès Oriental, UTM: 31T DG52) up to 2264 m (Llac de Malniu, Meranges, Cerdanya, UTM: 31TCH90, J. Muñoz coll.). Adults present from August to September.

Distribution

Pyrenees and Transversal mountain system (Montseny). Europe, Asia and North Africa.

Status

Synonymy: *Gomphocerus maculatus*. Not very abundant species.

Bibliography

Atkinson & Begon 1987 a, b and 1988; Aznarez 1972; Bellmann & Luquet 1995, p. 320; Burgos & Herrera 1986; Chapman & Joern 1990; Chopard 1943, p. 277 and 1951, p. 304; Clemente et al. 1989 a, b and 1990 a and b; Defaut 1999, p. 46; Dreux 1961; Fischer et al. 1996; Gangwere & Llorente 1992; Haes & Harding 1997; Harz 1975, p. 805; Herrera 1982, p. 114 and 1985; Herrera & Larumbe 1996; Isern-Vallverdú & Pardo 1990; Isern-Vallverdú 1990; La Greca 1975 and 1985; Luquet 1978; Marshall & Haes 1988; Martorell i Peña 1879; Marty 1969; Morales - Agacino 1942, p. 36; Nagy 1983 and 1987; Ponel & Hebrard 1988; Presa et al. 1983; Preston-Mafham 1990; Rague & Reynolds 1998, p. 361; Thorens 1984 and 1986 a; Uvarov 1934.

Doclostaurus maroccanus* (Thunberg, 1815)*Presence**

3 grid squares (0.8 %).

Description

Body: 17 to 37 mm. Lateral carinae of the pronotum white and X-shaped. The elytra in repose extending beyond the posterior knees. Posterior tibiae reddish or yellowish. May have one morphology for the solitary phase and another morphology for the gregarious phase.

Ecology

Present in: cereal crops and small meadow. Found above 80 m (Cap Norfeu, Roses, Alt Empordà, UTM: 31TEG27) up to 290 m (Los Ermitans, Menàrguens, Noguera, UTM: 31TCG12). The specimen found in La Noguera correspond to a female specimen found in studies on the consumption of a colony of lesser kestrels (*Falco naumanni*). By contrast, in the samples to determine the availability of Orthoptera for the lesser kestrel, none of this species of Orthoptera appeared. As the captures by the lesser kestrel are no further than 1 km from the birds' colony, we should assume that the Orthoptera was captured within the 10 x 10 km grid square. Adults present from July to August.

Distribution

Empordà plains and Central Depression. Southern Europe, North Africa and Asia.

Status

Cited for the first time in Catalonia. Very rare species.

Bibliography

Aguirre et al. 1987; Aznarez 1972; Baccetti et al. 1995; Badih & Pascual 1998; Barranco et al. 2000; Bellmann & Luquet 1995, p. 284; Bland et al. 1996; Bolívar 1876; Chapman & Joern 1990; Chopard 1938, 1943, p. 282 and 1951, p. 309; Defaut 1999, p. 42; Foucart 1997; García & Presa 1981; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; González-García 1987; Harz 1975, p. 660; Herrera 1982, p. 115; Llorente 1980; Marty 1969; Massa 1994 and 1998; Morales-Agacino 1941 and 1942, p. 37; Nagy 1983 and 1990; Naskrecki & Ünal 1995; Pardo 1993 b; Pascual 1975, 1978 a, b, c and d; Ponel & Hebrard 1988; Quesada-Moraga & Santiago-Alvarez 1999; Rague & Reynolds 1998, p. 298; Santiago 1994; Soltani 1978; Szijj 1992; Uvarov 1934.

***Doclostaurus jagoi* (Soltani, 1978)**

Presence

46 grid squares (13.6 %).

Description

Body: 15 to 24 mm. The elytra in repose reach the posterior knees. Wings slightly bluish. Posterior femora blue. Lateral carinae of the pronotum X shaped. This species is very close to *Doclostaurus genei*, a species also cited in the Iberian Peninsula. Distinguishing between the two species is very complex. In *D. genei* the males have between 22 and 35 teeth in the stridulatory row which is found on the inner face of the posterior femora (only visible with a microscope upwards of x 20) and in *D. jagoi* this stridulatory row has between 39 and 76 teeth. In any case, Defaut (1988) doubts the differentiation of these two species, although he proposes they can be distinguished by the male genitalia. This can be done even in the field with the help of a small magnifying glass and by lightly pressing the tip of the abdomen of the male (as with *O. raymondi*). The apical valves of the penis (in other words the structure that protrudes when you press the side of the tip of the abdomen) are elongated and have a pointed tip. Those of *D. jagoi* are short and curved.

Ecology

Present in: calcicolous rosemary scrub, silicate rockrose scrub and heath, thyme bushes, savannah-type meadow, dry field of false brome, small meadow, continental wilderness, cultivated land, fallow and margins of cereal fields. Found above 20 m (L'Ametlla de Mar, Baix Ebre, UTM: 31TCF12) up to 500 m (Castellnou d'Olugues, Segarra, UTM: 31TCG51). Adults present from July to September.

Distribution

Empordà plains, central high plateaux and basins, Central depression, Coastal mountain system and Coastal area. Southern Europe, North Africa and Asia.

Status

According to Soltani this species is more widespread than *D. genei*, which may also be found in Catalonia. Abundant species.

Bibliography

Aguirre & Pascual 1988; Badih & Pascual 1998; Badih et al. 1997; Barranco & Pascual 1993; Beiro et al. 1998; Clemente et al. 1990 b; Defaut 1999, p. 42; Foucart 1997; Gangwere & Llorente 1992; Gangwere & Spiller 1995; Garcia et al. 1984 and 1994; Gómez-Ladrón de Guevara & Presa 1990; Gómez-Ladrón de Guevara et al. 1992; González-García 1987; Hernández et al. 1998; Herrera 1982, p. 116; Llorente 1980; Massa 1998; Olmo-Vidal 1997 a, 2000 a and c and 2001 a; Olmo-Vidal & Llimona 2000; Pardo et al. 1990 and 1993 b; Pinedo & Llorente 1987; Presa et al. 1999; Pulido 1990; Ragge & Reynolds 1998, p. 300; Soltani 1978.

Arcyptera fusca* (Pallas, 1773)*Presence**

25 grid squares (6.8 %).

Description

Body: 23 to 39 mm. Lateral carinae of the pronotum are pale in colour, parallel to the prozona and slightly diverging to the metazona. The male elytra extend beyond the tip of the abdomen, shorter than the abdomen in females. Dark wings. Posterior tibiae are bright red with a yellow and black ring at the base, touching the knee. The males can be confused with *Stethophyma grossum*, however the latter have yellow posterior tibiae.

Ecology

Present in: mountain meadows. and subalpine meadow. Found above 630 m (Les, Val d'Aran, UTM: 31TCH14, MZB coll.) up to 1540 m (Meranges, Baixa Cerdanya, UTM: 31TCH90, UB coll.) Adults present from June to September.

Distribution

Pyrenees and Pre-Pyrenees. Central and Southern Europe. Asia.

Status

In regression. Not very abundant species.

Bibliography

Alonso & Herrera 1982; Antognoli & Zettel 1996; Bellmann & Luquet 1995, p. 270; Chopard 1938 and 1951, p. 312; Clemente et al. 1990 b; Defaut 1978 and 1999, p. 40; Dreux 1961; Garcia et al. 1987 and 1996; Harz 1975, p. 615; Herrera 1982, p. 117 and 1985; Isern-Vallverdú & Pardo 1990; La Greca 1985; López-Fernández et al. 1984; Martorell i Peña 1879; Marty 1969; Morales - Agacino 1942, p. 38; Mossot & Ewald 1994; Nagy 1987; Pinedo & Llorente 1988; Ponel & Hebrard 1988; Preston-Mafham 1990; Ragge & Reynolds 1998, p. 286.

Arcyptera brevipennis* (Brunner, 1861)*Presence**

1 grid square (0.2 %).

Description

Body: 23 to 44 mm. Lateral carinae of the pronotum are pale in colour and slightly flexuous, more than in *Arcyptera fusca*. Median carina of the pronotum slightly raised from the prozona. Elytra that reach roughly half way up the abdomen in males, shorter in females. The costal side of the elytra are also pale. Posterior femora with 3 dark stripes on the inner face. Posterior tibiae reddish with a yellow and black ring at the base.

Ecology

Present in dry thorny scrub. Found in a single location at 1500 m (Coll d'Ager, Ager, Noguera, UTM: 31TCG15). Adults present from June to August.

Distribution

Central Pre-Pyrenees. Distribution disconnected: South of France, North of the Iberian Peninsula (Pyrenees), Dalmatia, Istria and Herzegovina.

Status

Rare species.

Bibliography

Bellmann & Luquet 1995, p. 271; Chopard 1951, p. 313; Defaut 1999, p. 41; Garcia et al. 1996; Harz 1975, p. 624; Herrera 1982, p. 118.

Ramburiella hispanica* (Rambur, 1838)*Presence**

24 grid squares (6.5 %).

Description

Body: 17 to 30 mm. Dorsal part with a pale stripe that goes from the head to the tip of the elytra. Head with a narrow vertex. Pronotum with a marked median carina, with an incision or furrow in the middle. Well-developed tegmina in both sexes, with a white line at the base of the costal margin. The wings are slightly pinkish at the base. The posterior femora have three dark stripes on the inner face. The posterior tibiae are a bluish colour. The subgenital plate of the male is conical. The valves of the ovipositor are very short.

Ecology

Present in: calcicolous rosemary scrub, silicate rockrose scrub and heath, thyme bushes, kermes oak, savannah-type meadow and continental wilderness. Found above 20 m (Garraf, Sitges, Garraf, UTM: 31TDF06) up to 536 m (Sant Hipòlit de Voltgrà, Osona, UTM: 31TDG35, MZB coll.). It prefers habitats with little vegetation, such as outcrops of mother rock. Adults present from June to October.

Distribution

Empordà plains, Transversal mountain system, central high plateaux and basins, Central depression and Coastal mountain system. Iberian Peninsula (also French Mediterranean coast) and North Africa.

Status

Rare species, although in El Garraf it can be abundant in some areas.

Bibliography

Aguirre & Pascual 1988; Aguirre et al. 1987; Arcos & Pascual 1988; Badih & Pascual 1998; Barranco & Pascual 1993; Beiro et al. 1998; Bellmann & Luquet 1995, p. 276; Chopard 1943, p. 286 and 1951, p. 315; Defaut 1999, p. 35; García & Presa 1981; Gómez-Ladrón de Guevara et al. 1992; Harz 1975, p. 631; Herrera 1982, p. 118 and 1985; Llorente 1980; Marty 1969; Morales - Agacino 1942, p. 39; Olmo-Vidal 2000 b and c; Pardo et al. 1990 and 1993 b; Pascual 1978 a, b, c and d; Pinedo & Llorente 1988; Presa et al. 1999; Ragge & Reynolds 1998, p. 292.

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