

The European Butterfly Monitoring Scheme (eBMS, www.butterflymonitoring.net) aims to collect data and promote monitoring and conservation of these insects. The BMS network includes thousands of volunteers collecting data following the same protocol. The Greek BMS (apollo-grBMS) is coordinated by the University of Ioannina (BCL, https://bc.lab.uoi.gr/en/research/projects/apollo/).

The aim of this guide is to help on the identification of the most common butterfly species in the Epirus region in Northwest Greece.

This guide can be downloaded as pdf file at the following website:

www.butterfly-monitoring.net/field-guide



Greek Butterflies

Greece is one of the richest European countries in terms of butterflies, hosting **236 butterfly species**. Epirus region hosts 155 species, out of which 102 presented in this guide.

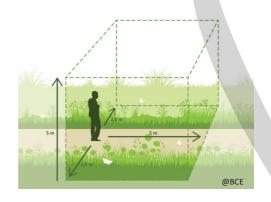
Butterfly Monitoring

To monitor butterflies we use the **transect method**, where a person counts all butterfly species and individuals along a path inside an imaginary cube of 5x5x5 meters (see image below).

The transect must be monitored frequently, at least 3-8 times per year (every 20 days), on sunny days, morning hours with a temperature between 13°C and 35°C and best between 18-25°C. In Greece, the suggested transect length is 300m (one section), although more is welcome. Before starting and at the end, the recorder has to note: temperature, percentage of clouds, and wind strength using the Beaufort scale (see the table).

Another method for monitoring butterflies is the **15-minutes count**, through the app **ButterflyCount**. It is possible to do the count anywhere, along a path or on a fixed point, following the same instructions as previously described regarding weather and time, and turning the phone GPS on while the app is running.

For more information, please visit the website www.butterfly-monitoring.net/el or apollo-grBMS https://bc.lab.uoi.gr/en/research/projects/apollo/



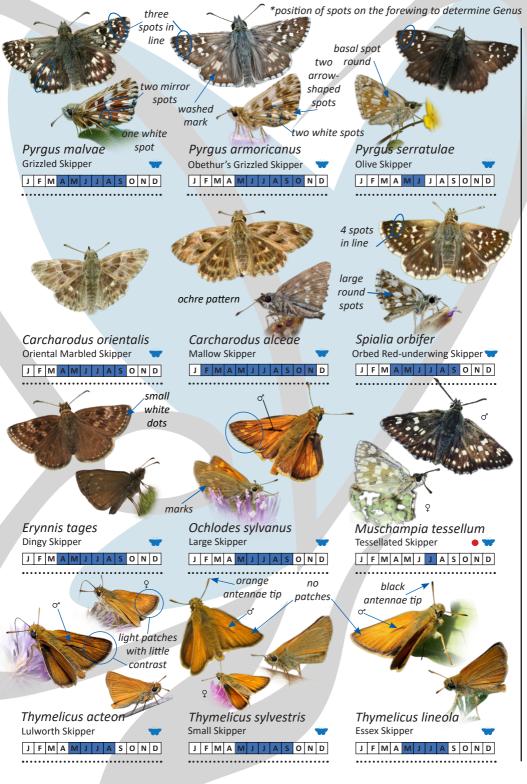
Beaufort scale

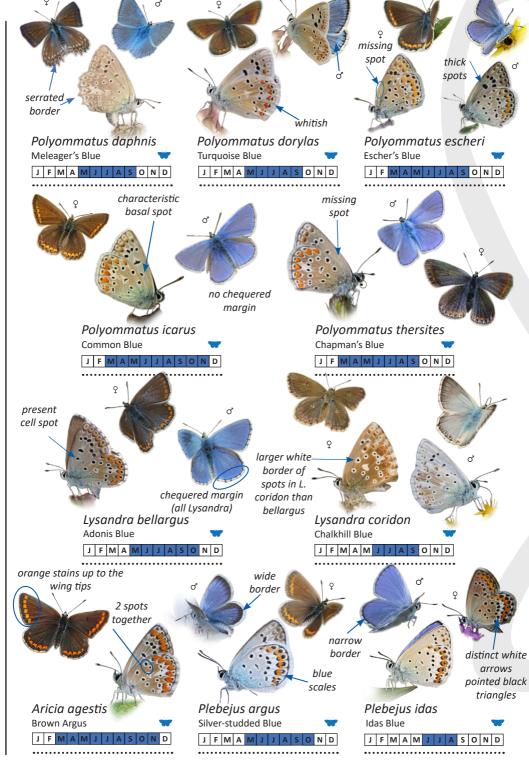
| 0 Calm | Smoke climbs vertically |
|-----------------|-----------------------------------|
| 1 Light Air | Direction shown by smoke drift |
| | but not by wind vanes |
| 2 Light breeze | Wind felt on face; leaves rustle; |
| | wind vane moved by wind |
| 3 Gentle Breeze | Leaves and small twigs in con- |
| | stant motion |
| 4 Moderate | Raises dust and loose paper; |
| Breeze | small branches moved |
| 5 Fresh Breeze | Small trees in leaf begin to sway |

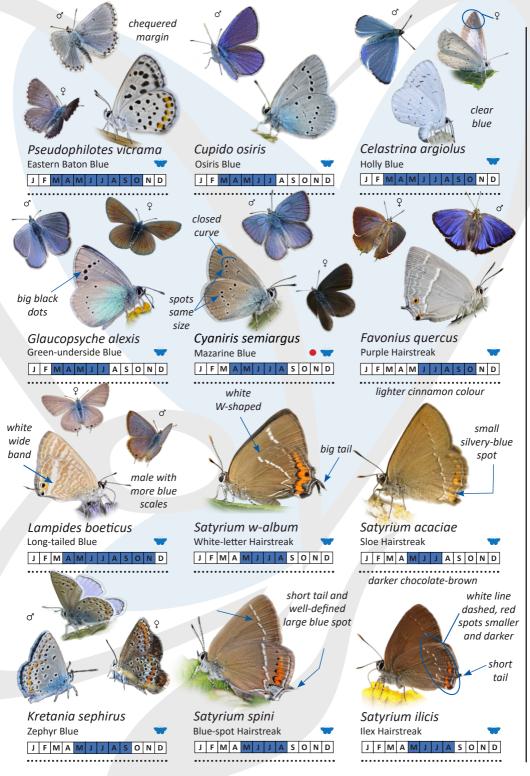
How to use this guide

This guide shows 102 butterfly species that you can find in the Epirus region and surrounding areas. Species are ordered by family and similar species are grouped together to help in their identification. Usually, both upper and under side are shown. For those species with sexual dimorphism (males and females have different appearance), both males and females are shown. For an easier identification, pay attention to flight periods: the bars below each species show in bluish the months when butterflies are flying. The symbol on the right represents the approximate size of the species (small, medium, or large). Please note that pictures are not on scale, to better show the details of the different species.

Please check the characters highlighted in this guide through arrows or circles to help with identification. Correct identification of butterflies is often easier through pictures or catching them. On the last page of this guide, you will find the complete legend of all the used symbols.

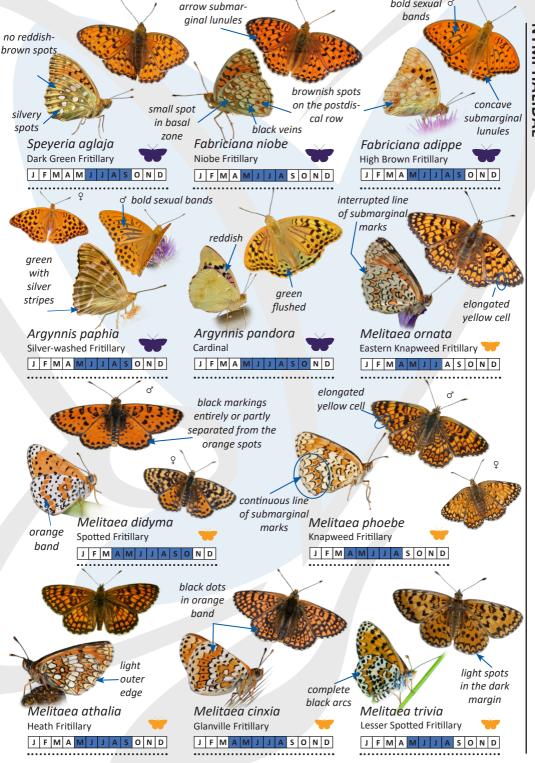


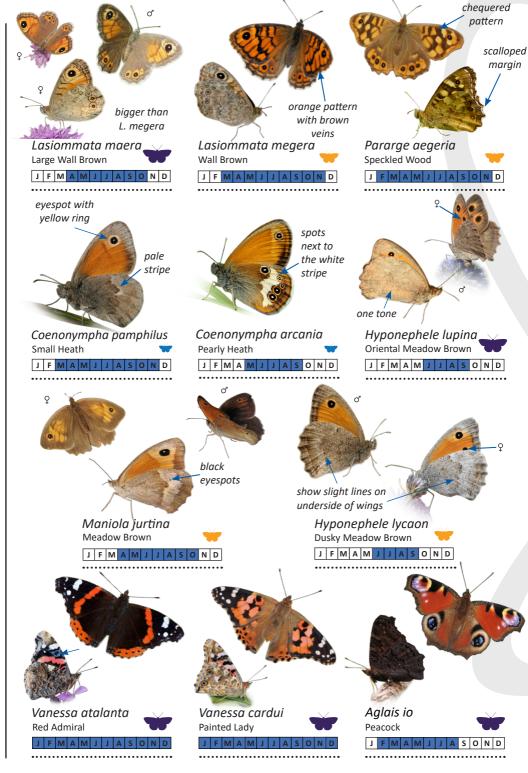


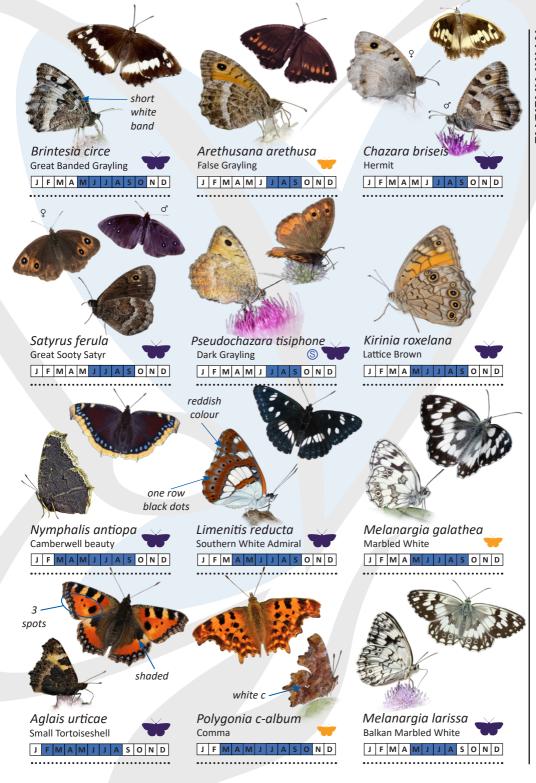


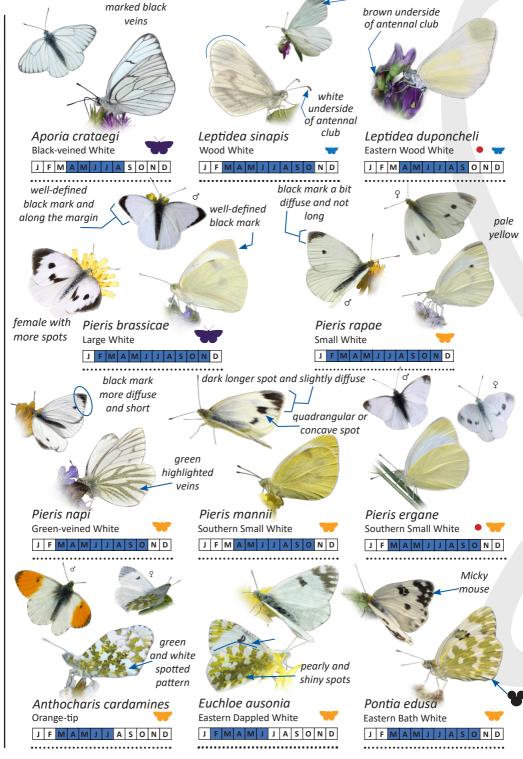


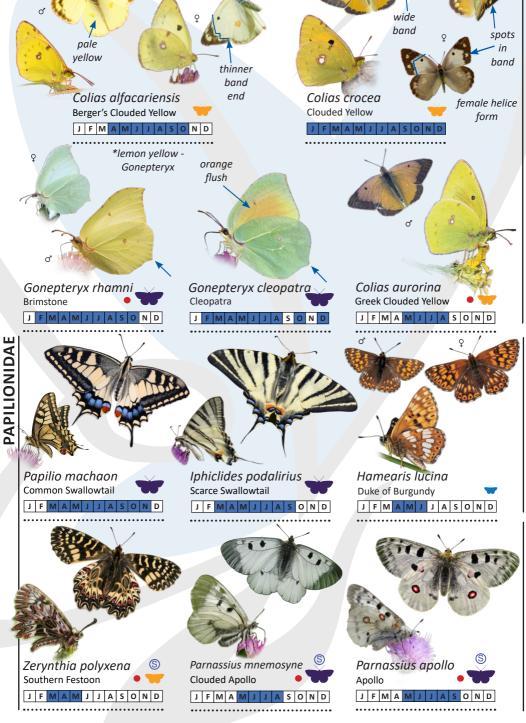
bold sexual ♂











*vanilla yellow

colour - Colias

wedge-shaped

band

Butterfly Conservation Europe (BCE) and UK Centre for Ecology and Hydrology (UKCEH) have created the European Butterfly Monitoring Scheme (eBMS) to collect data from different Butterfly Monitoring Schemes all over Europe. Each State cooperating to this project shares data with eBMS yearly, in order to analyse and evaluate population trends of European butterflies and European indicators, creating a starting line for future policies to protect butterflies and their habitat.

The coordinator of the Greek Butterfly Monitoring Scheme (apollo-grBMS) is BCL (Biodiversity Conservation Lab) at the Department of Biological Applications & Technology of the University of Ioannina. For more guidelines on how to register, sample butterflies in the field, identification tools and manuals, please visit the lab page https://bc.lab.uoi. gr/en/research/projects/apollo/or directly download material from the apollo google drive (see link below).

This guide can be downloaded as pdf file on the eBMS website: www.butterfly-monitoring.net/field-guides and from apollo drive https://drive.google.com/drive/u/1/folders/1RbWuwRM7EnrNxpJqR9soOxz4LfCM9Rxe

This guide has been sponsored by project SPRING in the framework of DG Environment contract service (European

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Graphis design: Cristina G. Sevilleja

eBMS - European Butterfly Monitoring Scheme SPRING - Strengthening Pollinator Recovery through INdicators and monitorinG

Flight period: months when butterflies are flying



Butterfly size:

Small **





Gender:

♀ Female ਨੂੰ Male

Symbols:



Noticeable characters useful for species identification

Species label:

protected species

sensitive species (threatened by trade/ collection)

December 2024



















