

## Materials and Tools

As part of ABLE project we are producing new materials to help new monitoring schemes to start and to assist recorders in the field. We produced new material for volunteers together with some new schemes and collaborators and a new Mobile App to increase butterfly monitoring in Europe.

### New materials

#### Transect Manual

Simple rules are necessary to run a new butterfly transect but not everybody knows them. Last July, the Butterfly Transect Counts- Manual was updated based on the Butterfly Manual of BCE but making it shorter and adding specific points for starting new transects. Thanks to the eBMS partners we translated the manual into Portuguese, Italian and Spanish and an adaptation to Polish.



#### eBMS Leaflet

Dissemination is one of the most important parts of a project based on citizen science. For that reason, we have produced a leaflet explaining the eBMS network and the simple rules to be followed to create a transect anywhere in Europe. To reach as many countries as possible Europe, this eBMS leaflet was translated to Greek, Turkish and Spanish. You can find them via the link: <https://butterfly-monitoring.net/ebms>



**ABLE**

The ABLE project is a partnership between Butterfly Conservation Europe (BCE), the Centre for Ecology and Hydrology (UK), the Helmholtz Centre for Environmental Research (HZP, Germany), Dutch Butterfly Conservation and Butterfly Conservation (UK). It is funded by a service contract from the European Union Directorate for the Environment, for an initial period of two years from 2019-20.

To learn more about the Butterfly Monitoring Scheme, the transect methodology and any details about butterfly monitoring, please visit the website of Butterfly Conservation Europe ([www.bce-ec.europa.eu](http://www.bce-ec.europa.eu)).

If you want to start a transect in your country you could visit the website of eBMS ([www.butterfly-monitoring.net](http://www.butterfly-monitoring.net)). You could register all your transect visits and see other transects in Europe.

ABLE - Assessing Butterflies in Europe  
eBMS - European Butterfly Monitoring Scheme  
[www.butterfly-monitoring.net/able](http://www.butterfly-monitoring.net/able)

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Centre for Ecology & Hydrology | Butterfly Conservation | Helmholtz Centre for Environmental Research | eBMS | Butterfly Conservation

**Expanding Butterfly Monitoring**

Become a citizen scientist counting butterflies!

There are already thousands of volunteers throughout Europe helping in butterfly observation. They count butterflies under Butterfly Monitoring Scheme (BMS) in different countries to know their status. They report their observations to the national eBMS coordinator for producing butterfly hotspots.

The European Butterfly Monitoring Scheme network is growing everyday. In 2019 there were 17 schemes, covering 15 countries in Europe. More than 4000 butterfly transects are counted every year by volunteers who collect data in order to help, protect and sustain butterflies and their habitats.

All the data is collected in a central online system, eBMS - European Butterfly Monitoring Scheme. The map shows the current transects in purple and newly created ones in red.

[www.butterfly-monitoring.net](http://www.butterfly-monitoring.net)

**Assessing Butterflies in Europe**

ABLE is an European Pilot-Project which aim to create a representative monitoring network of Butterflies throughout Europe.

There are still many European countries without a Butterfly Monitoring Scheme. With the ABLE project we want to help these countries develop schemes and spread the importance of butterfly monitoring. The map shows countries with existing schemes in orange and target countries in purple.

ABLE provides support, training for identifying butterflies and workshops for the volunteers in target countries.

Globally insects are decreasing rapidly for many reasons. Monitoring them is important to track their trends in abundance. It also helps to identify the reasons for their decline and generate effective conservation actions.

Be part of our network and help us to assessate butterflies!

**Butterfly Transects**

The transect is the method used in the European BMS for monitoring. It is simply a fixed route (walk) visited frequently in order to record the different butterflies and their numbers. You just need to:

- Walk your transect at a slow, constant pace.
- Count all butterflies by individual species in an imaginary box, 2 m to each side and 1m in front and above you.
- The visits should be done with good weather: sunny and warm, with no rain and not too windy.

Report your records to the national coordinators or to eBMS.

ABLE produces field guides of butterfly species by regions to identify them easily!

**How many times is it should walk the transect?**

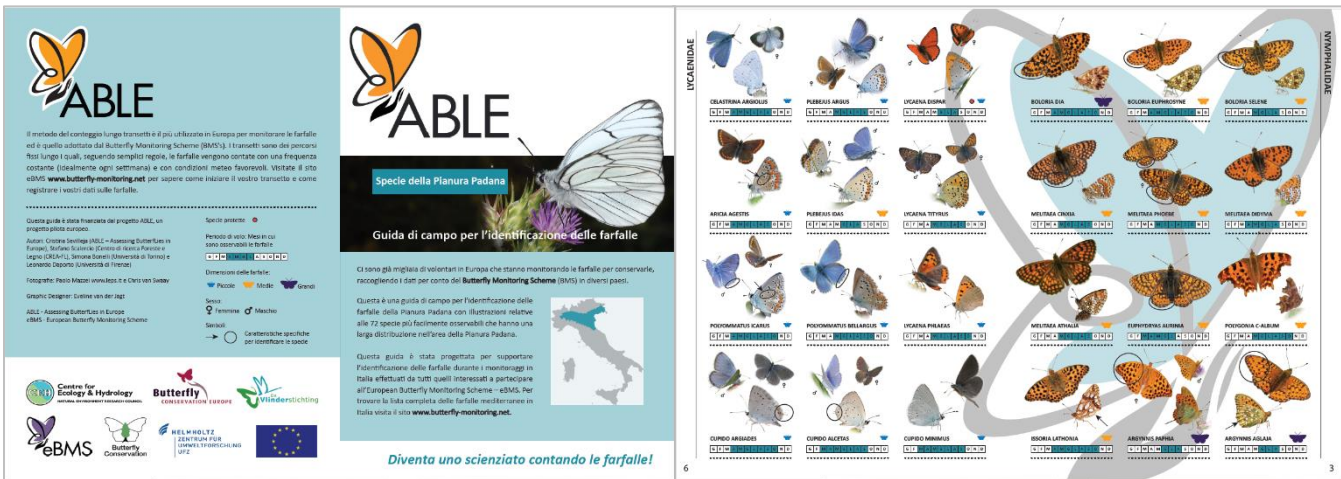
Ideally, every week in the flight period of the species. A visit every two weeks or 10 days also provides good results. A minimum of 1 visit is needed as a maximum in a year.

**Where to count butterflies?**

Wherever you want, in a forest, meadow or in a city. Preferably close to your home or place of work.

## Field Guides

One golden fruit from the ABLE project are the Field Guides! Many countries in Europe are very rich in butterfly species and identifying butterflies is a real challenge. In Italy there are around 290 species and the lack of identification guides were a problem. Together with the Italian Butterfly Group we divided Italy into climatic regions and selected the 72 most common species in each. We eventually produced 4 different Field Guides from specific regions: Padana plain, Mediterranean area, Apennines and Mediterranean Islands.



We translated the text, organised the species by families and genus and showed special characteristic to enable correct identification. You can download the guides from the eBMS website and print them directly.

## Booklet of Portuguese butterfly species

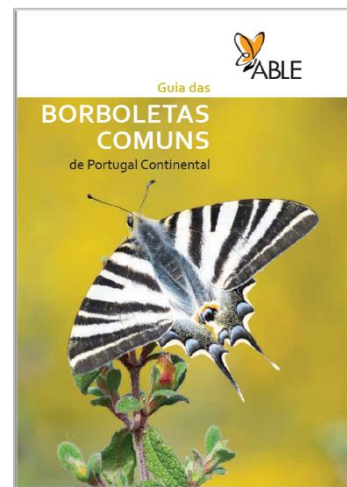
This booklet was funded by the ABLE project and created with the help of Tagis - Centro de Conservação das Borboletas de Portugal. We wanted to produce something easy and useful for the Portuguese volunteers. This booklet illustrates **60 common butterfly species** in Portugal Continental and it is a great help for those just beginning to identify butterflies and want to participate in the Butterfly Census of Portugal.

You can download the booklet on the website of Tagis:

<http://www.tagis.pt/uploads/4/7/9/5/47950987/gbc.pdf>

or on the website of eBMS, in the section of ABLE -> Results

<https://butterfly-monitoring.net/able-results>



If you want to produce similar materials in your country or have other suggestions, please contact us directly.

## Tools

### A new app for monitoring butterflies

As part of ABLE, we have developed a mobile application for collecting butterfly abundance data. The first version is available on both Apple and Android phones, downloaded via:

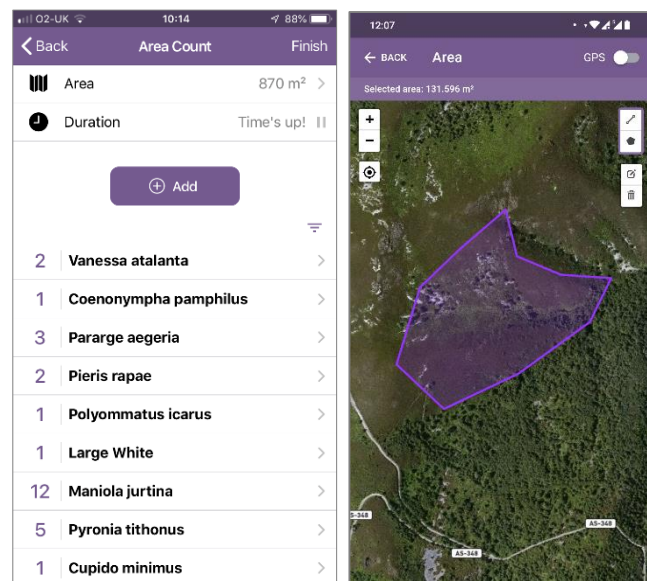


For Apple devices (iPhones, iPads) –

<https://apps.apple.com/ie/app/ebms/id1461711373>

For Android devices - [https://play.google.com/store/apps/details?id=uk.ac.ceh.ebms&hl=en\\_GB](https://play.google.com/store/apps/details?id=uk.ac.ceh.ebms&hl=en_GB)

The app captures butterfly counts from a fixed time (15 minutes) with accurate information about the area sampled (using the phone GPS to track a route, or by drawing an area on a map). The app can be used for **timed counts** at any time in any location. We do not believe there is another mobile app providing this function for all European butterflies. This simple method complements the two main data sources for assessing butterflies – analysis of opportunistic sightings (presence-only data for atlases, i.e. collected by systems such as iNaturalist/Observado/iRecord) or via Butterfly Monitoring Scheme transects (regular counts from a fixed route). BMS transects remain the ‘gold standard’ but we recognise that these can be a big time commitment and are not practical in some situations (e.g. remote areas, agricultural areas, urban areas).



The app includes the latest butterfly checklist for Europe (Wiemers et al., 2018 - <https://zookeys.pensoft.net/article/28712/>) as well as common names in English and Swedish (please let us know if you are able to provide common names in other languages). The app has been translated into Spanish, Swedish and Lithuanian, with more languages being added. A guide to using the app is attached and is available at: <https://butterfly-monitoring.net/ebms-app>

We are hugely grateful to ABLE collaborators who have helped test the app across Europe. Feedback is very valuable for planning the next version of the app that will be officially launched in early 2020.