Butterfly Conservation Europe Activity report 2022

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BCE on 31 December 2022

Board: Sam Ellis (chair), Chris van Swaay (secretary), Martin Wiemers (treasurer), Simona Bonelli, Evrim Karaçetin, Lars Pettersson, Constanti Stefanescu and Nigel Bourn.
European Environmental Policy Advisor: Sue Collins
Head of Development: Martin Warren
Advisors to the board: Irma Wynhoff, Josef Settele, Dirk Maes, Aidan Whitfield, Rudi Verovnik, Martina Šašić, Cristina Sevilleja, Mike Prentice, Holly Mynott and Miguel López Munguira.

Production

Butterfly Conservation Europe, www.bc-europe.eu
P.O. Box 506, NL-6700 AM Wageningen, Netherlands

Preferred citation

Ellis, S., Van Swaay, C.A.M., Wiemers, M., Munguira, M., Pettersson, L.B, Bonelli, S., Karaçetin, E., Collins, S., Wynhoff, I., Settele, J., Maes, D., Verovnik, R., Šašic, M., Whitfield, A., Sevilleja, C., Prentice, M. & Warren, M.S. (2023). Butterfly Conservation Europe. Activity Report 2022. Report VS2023.028, Butterfly Conservation Europe & De Vlinderstichting/Dutch Butterfly Conservation, Wageningen.

April 2022

Figure 1. BCE's board members and advisors November 2022, Laufen Board Meeting: (from left to right first line) Constanti Stefanescu, Rudi Verovnik, Aidan Whitfield, Josef Settele, Sue Collins, Martina Sasic, Simona Bonelli, Irma Wynhoff, Evrim Karacetin, Dirk Maes, Nigel Bourn, Lars Pettersson, Chris van Swaay, Mike Prentice, Martin Warren (sitting from left to right sitting) Miguel Munguira, Martin Wiemers, Holly Mynott, Sam Ellis, and Cristina Sevilleja.

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Introduction

By Sam Ellis, Chair, BC Europe

A warm welcome to our annual report on the activities of BC Europe during 2022. The Board met twice during the year, in March and November, with the latter the first in-person meeting for three years. I am very pleased to report that Nigel Bourn, Chief Scientist at Butterfly Conservation has joined the Board and will represent the organisation at BC Europe in future. I'm also pleased to report that Holly Mynott, the new International Officer at Butterfly Conservation, has agreed to offer secretarial support and will now be taking the minutes at forthcoming Board meetings.

During 2022 BC Europe continued its involvement with several exciting projects which aim to ensure Europe's butterflies and moths are conserved. Sue Collins and Martin Warren report below on the SPRING project, which will establish a European pollinator monitoring scheme. BC Europe is involved several project tasks, and Cristina Sevilleja and Martin Warren outline the continued development of the eBMS and Chris van Swaay describes the moth monitoring trials undertaken to see how a European moth monitoring scheme might operate.

The threat status of both European butterflies and moths are currently being reviewed through IUCN-led and EU-funded projects. BC Europe and its Network Partners are playing a crucial role in both, providing distribution and abundance data, as well as the expertise needed to moderate the preliminary assessments through online workshops. Martin Warren outlines progress with the European Butterfly Red List, an update of the 2010 list. The European Moth Red List is the first ever to be done and is a gargantuan task with over 3,000 macro-moth species to be assessed. I report on the excellent progress being made by the project team.

The 2010 Butterfly Red List identified several threatened island endemics in Macaronesia. In 2021 and 2022 BC Europe worked in partnership with Madeira Fauna & Flora to deliver a LIFE4BEST-funded project to help conserve three of Madeira's four threatened endemics. I report below on the work undertaken to survey the butterflies, establish a monitoring scheme and identify appropriate conservation actions to secure the future of two of these three species – sadly we conclude one of them is now globally extinct.

Thanks to Sue Collins, with support from Aidan Whitfield and Holly Mynott, BC Europe continues to play a very active role influencing environmental policy decisions in the EU. The main highlights of their work are also reported below, together with a summary of the work undertaken by Butterfly Conservation's European Butterflies Group.

Finally, I would like to thank all the BC Europe Board members and advisors for their hard work and support during the year. 2023 will be another critical year for conserving Lepidoptera and other insects. We look forward to playing our part in meeting this challenge.

SPRING project

Sue Collins, European Policy Advisor, BC Europe and Martin Warren, Head of Development, BC Europe

Good progress has been made with the major EU funded project **SPRING** (**S**trengthening **P**ollinator **R**ecovery through **IN**dicators and monitorin**G**). This aims to develop a European Pollinator Monitoring Scheme (EU-PoMS) to monitor the status of Europe's crucial pollinators. The continued development of the eBMS is a major part of this wider scheme and is covered in the following section.

SPRING is divided into 5 main tasks. Task 1 is the continued development of the eBMS by BC Europe and its partners. It also includes a Citizen Science element led by Miranda Bane and Michael Pocock of UKCEH. They have circulated a questionnaire widely around Europe and the results are being analysed now to inform the future of the project. Task 2 is a training element led by Naturalis to develop online course in ID of various pollinators. Butterflies will be included. Task 3 includes field trials of the EU Pollinator Monitoring programme such as pan traps and transects. Task 4 was the moth monitoring trials led by Chris van Swaay of Dutch BC (see below) and another section for Malaise traps. Task 5 covers communications.

Further details on the SPRING project can be found on their website

https://www.ufz.de/spring-pollination/index.php?en=49053

Figure 2. Forestry in Slovenia (Photo: Martin Warren).

eBMS meeting in Laufen, December 2022

By Martin Warren, BC Europe, and Cristina Sevilleja, Dutch BC.

This highly successful meeting brought together BMS co-ordinators and other interested BCE Partners to discuss progress with the European Butterfly Monitoring Scheme (eBMS) specifically under the SPRING project. The meeting ran from 30th November - 3rd December and was attended by 50 participants from 27 countries. This was the first physical meeting of the butterfly coordinators, experts and eBMS team since the pandemic and was a wonderful opportunity to meet and share information on progress and best practices.

David Roy and Reto Schmucki, UK Centre for Ecology and Hydrology (UKCEH) started by giving an overview of progress with the eBMS and its continually growing database. It now comprises 28 BMS schemes in 23 countries and contains over 5 million butterfly observations from over 12 thousand butterfly transects, covering 17,600 km and 324 butterfly species. Cristina Sevilleja then explained progress with developing schemes in new countries. Many new materials had been provided to new and developing schemes, including regional identification guides. The butterfly monitoring manual has now been translated into 10 languages, including Albanian and Japanese! Great progress was described with schemes in Cyprus, Portugal, Spain, Bulgaria, Austria and Turkey by their coordinators. Target countries to develop new schemes under the SPRING project are Denmark, Lithuania, Latvia, Slovakia, Romania and Greece where some progress has been done.

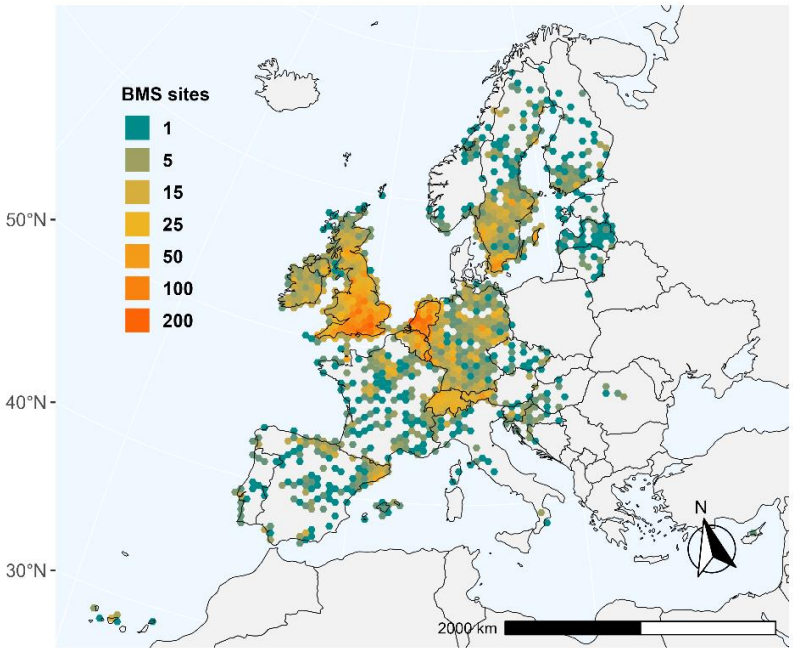

Figure 3. Transect density on eBMS database up to 2020

These talks were then followed by an update on the SPRING project by Josef Settele, UFZ, Germany; The European Pollinator Academy: Developing an online hub for taxonomic capacity building by Mark van Nieuwstadt, Naturalis; EU PoMS, monitoring other pollinators, pollinator indicator by Simon Potts, University of Reading; and towards a European Moth Monitoring Scheme by Chris van Swaay, Dutch BC.

There were then break-out group discussions on sharing solutions to common problems and on how to analyse BMS data. The next session covered talks on the new European Butterfly Red List by Chris van Swaay, Dutch BC; Towards a first Red List of European Moths by Sam Ellis, Chair BC Europe; Global Butterfly Indicator by Holly Mynott, BC UK; and *Phengaris* conservation in Bavaria by Christian Stettmer, ANL, Germany.

The next day was kicked off by an inspiring video message from Martin Hosjek, MEP Czech Republic who was the main advocate of the SPRING project and great advocate of action on pollinators. This was followed by a wide-ranging discussion on policies affecting butterflies, moths and other pollinators led by Sue Collins and Aidan Whitfield, Policy Advisors to BC Europe. Holly Mynott then described Member State Pledges and Habitat Directive Article 17 reports, which was followed by a discussion on how to engage with Member States and encourage support for eBMS and for more conservation for Lepidoptera, led by Xavier Mestdagh from Luxemburg and Simona Bonelli from Italy.

Figure 4. One of the group during the break-out groups discussing solutions for butterfly monitoring (Photo: Cristina Sevilleja).

The meeting concluded by a fascinating session on wider engagement, which covered Monitoring urban butterflies in Spain by Yolanda Melero, CREAF, Spain; Feedback to volunteers: 1st Italian BMS Report by Simona Bonelli, Italy BMS; Outreach to public: Communication to volunteers by Eglė Vičiuvienė, Lithuania BMS; Reports to volunteers: Constanti Stefanescu - Catalan BMS; Mikko Kuussaari - Finnish BMS; Elisabeth Kühn - German BMS and Lars Pettersson - Swedish BMS.

All the presentations and a video of the meeting can be seen at: https://www.vlinderstichting.nl/butterfly-conservation-europe/about-bce/partner-meetings/laufen-2022

Figure 5. One of the group during the break-out groups discussing solutions for butterfly monitoring (Photo: Cristina Sevilleja).

Moth monitoring under SPRING

By Chris van Swaay, Dutch BC

Although moth monitoring in the United Kingdom already started in the 1960s with the Rothamsted Insect Survey, systematic monitoring of moths by volunteers in other European countries only took off recently. Moth monitoring is part of the SPRING project, and in 2022 data was collected via the moth monitoring module of www.butterfly-monitoring.net and the ButterflyCount app.

Most moth species are attracted to light, therefore LED traps are a good option to monitor moths. A great advantage over traditional traps is that they are portable, relatively cheap and switch on and off (simultaneously) with a light switch. This makes it a potentially very useful method to monitor changes in moth populations.

The total number of moths found in the traps differs per country, habitat and over time. Especially in Spain and Hungary numbers were regularly very high, even leading to problems to count all moths in the traps to species level. Even though the traps in Netherlands are at one of the best and darkest places in the country, numbers per trap are low as compared to other countries. Over the whole year we can see the following changes in the total number of moths per trap per night inside the traps in 2022:

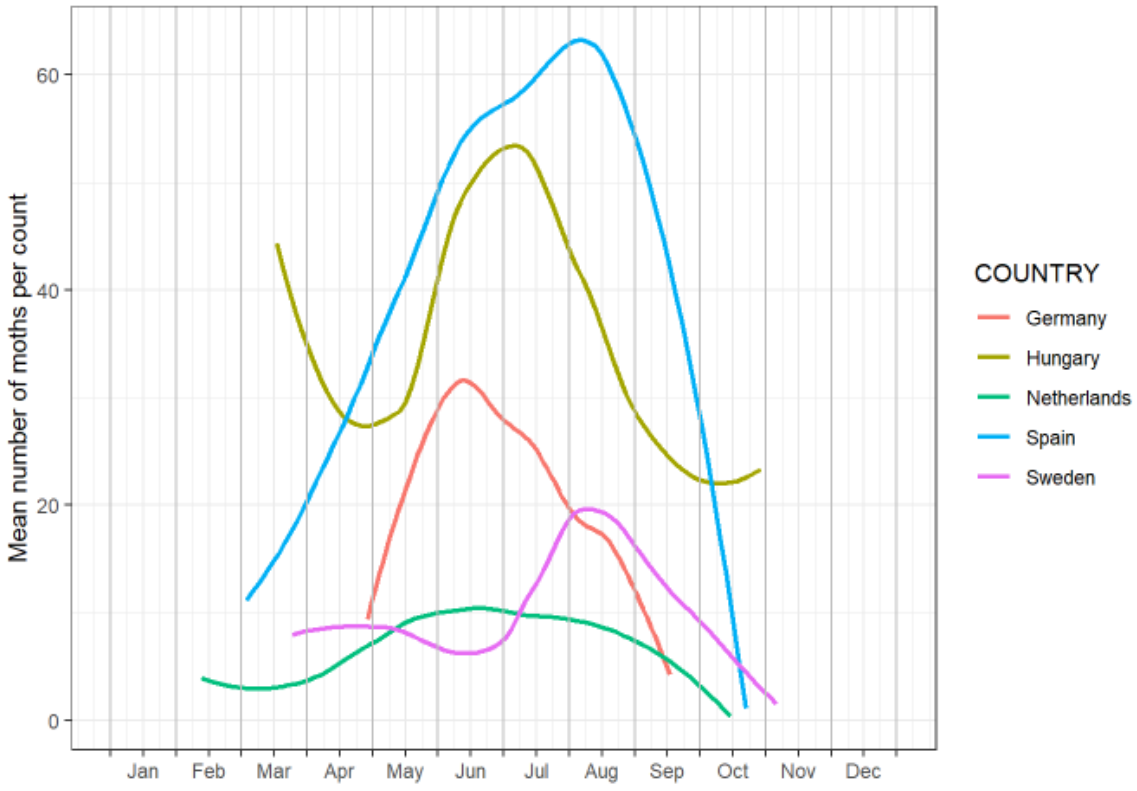

Figure 6. Number of moth individuals collected during 2022 in the moth traps under the SPRING project in the 5 testing countries

Global butterfly monitoring

By Holly Mynott, Butterfly Conservation, UK

There is mounting evidence of widespread declines in the diversity and abundance of insects across the world. However, insects are highly underrepresented in global biodiversity monitoring, in conservation literature, and in global indicators used by the international community. The Living Planet Index and the Red List Index are two of the key global indicators that assess species level change under Goal A of the new Kunming-Montreal Global Biodiversity Framework. However, due to a lack of data, insects are excluded from both of these indicators.

The international community cannot conserve insects if it does not measure or understand what is happening to them. The Global Butterfly Index seeks to address this problem, by creating a global indicator of butterfly population trends as a first step toward representing insect biodiversity. This will be used to inform policy, drive change, and advocate for more effective global conservation of butterflies and insects more widely.

The Global Butterfly Index project is a collaboration between Butterfly Conservation, Butterfly Conservation Europe, De Vlinderstichting, IUCN Species Survival Commission on Butterflies and Moths, UK Centre for Ecology and Hydrology, and the Zoological Society of London.

As a first step in 2023, we aim to collate data to create a preliminary global butterfly index to contribute to the 2024 Living Planet Index (calculated by the Zoological Society of London) and publish a paper about the creation of the index, in which all data contributors are invited to be credited as authors.

Alongside this, we are focusing on searching for funding for the wider Global Butterfly Index project. Our priority is to facilitate the establishment of new butterfly monitoring schemes in underrepresented countries, to address data gaps that currently bias index calculations towards Europe and North America. To provide infrastructure for citizen scientists to monitor butterflies no matter what country they live in, we aim to develop the ButterflyCount app for use around the world. The app is currently available in Europe, Japan and Kenya, and we would like to expand it by adding further species, languages and survey methodologies (e.g. fruit traps).

Figure 7. Striped Ringlet *Ragadia luzonia treadawayi*, Philippines (Photo: Holly Mynott)

European moth Red List

By Sam Ellis BC Europe

Figure 8. Burnet with pollinia (Photo: Martin Warren)

The project team of Jurriën van Deijk, Chris van Swaay, Mark Parsons and Phil Sterling are also making excellent progress towards producing Europe's first ever moth Red List. The project focuses on macro-moths plus the only Habitats Directive micro-moth *Glyphipterix loricatella*. One of the first tasks was to determine which species should assessed, this resulting in a list of over 3,200 taxa. As with the butterfly Red List, the starting point for the assessments is to calculate the Extent of Occurrence and the Area of Occupancy from distribution data. The team downloaded GBIF data and then combined this with data from national and regional experts, as well as selected references. By the end of 2022, 9.5 million records had been collated for 2,665 species, so meant the team had no records at all for 535 species. However, the assessments focus on the period 2011-2020 for which over 5 million records were available for 2,492 species. That meant records were lacking for almost 700 species for the assessment period.

The 'missing' species were mainly from Eastern Europe and Russia, so considerable effort is being made to track down data for as many of these species as possible. BC Europe Network Partners have been contacted and many are helping with the process of filling in these knowledge gaps, both with data or their expertise in a species-specific questionnaire.

The project team are now compiling provisional assessments for both Europe and the EU 27 countries. They estimate there could be as many as 500 species in the threatened or near threatened categories. The next stage will be for regional and national experts to review these provisional assessments at a series of bioregional workshops. The reviewed assessments will then be checked by IUCN and the project team will focus on producing the species accounts for the IUCN website. The final assessments will be published in 2024.

European butterfly Red List

By Martin Warren, BC Europe

The core team of Chris van Swaay, Sam Ellis and myself have made excellent progress towards a European Butterfly Red List, to update the last one published in 2010. The new list draws on a variety of new data sources: 1) Calculations of Area of Occupancy and Extent of Occurrence from distribution data gathered from public sources such as GBIF, Observado, iNaturalist and Lepidiv, supplemented by data provided on request by BC Europe Partners; 2) An analysis of distribution trends from this data; 3) Species trend data from the eBMS where available. This data was used to make provisional assessments which were then discussed at 5 bioregional workshops with experts in December. All the analyses and assessments are done for Europe as a whole and the EU27 separately. The revised assessments were then sent for double checking early in 2023. All the species accounts and new assessments have been updated on the IUCN website and will go live when they have all been checked by IUCN later in 2023.

Conserving Madeira's endemic butterflies

By Sam Ellis, BC Europe

Our LIFE4BEST funded project to help conserve Madeira's threatened butterflies came to a successful conclusion in October 2022 with a conference held at the University of Madeira. We used data collected by the 15-minute Count on 49 survey routes to plot the distribution and density of all butterflies recorded in August/September 2021. We sampled mainly in the primary humid laurel forest but also in mixed and exotic forests and in montane heathland.

The Madeiran Speckled Wood *Pararge xiphia* was recorded on 80% of survey routes and at high densities, especially in the higher altitude laurel forests in the island's central region. Earlier concerns about competition from the invasive Speckled Wood *Pararge aegeria* were allayed to some extent, as the *xiphia*:*aegeria* ratio was 44:56% overall with the proportion of *P. xiphia* rising to 75-100% in the humid laurel forest. Overall *P. xiphia* was the third most abundant species in our survey. On the other hand, the Madeiran Brimstone *Gonepteryx maderensis* has a much more restricted distribution being confined to the northern half of the island and occurring only at low densities on 33% of survey routes. Sadly, we were unable to find the Madeiran Large White *Pieris wollastoni* and this species, last recorded in 1986, must now be presumed to be globally extinct, the first European butterfly in this unenviable category.

The Macaronesian Buckthorn *Rhamnus glandulosa* is the sole larval hostplant of *G. maderensis* and this species itself is rare on Madeira. This tree is confined to riparian vegetation in the primary humid laurel forest and this habitat has been negatively affected by changing water abstraction regimes and by invasive alien species (IAS). We proposed a number of conservation actions that should benefit *R. glandulosa*, and *G. maderensis* in turn, including adjusting water abstraction rates and removing IASs from more degraded habitat. *R. glandulosa* is relatively easy to grow and its population could be boosting by a propagation and planting programme, activities that could easily be undertaken by volunteers and schoolchildren.

The 15-minute Count data were also used to build Species Distribution Models and to identify Key Butterfly Areas (KBAs) on Madeira. The SDMs predict where each species might occur and therefore help target future butterfly surveys. Within the KBAs, 20 transect routes were identified and staff from the Institute of Forests and Nature Conservation and other volunteers have been trained to undertake butterfly transect counts. Monitoring began in 2022 and these transects form the core of the new Madeira Butterfly Monitoring Scheme (maBMS). A Madeiran butterfly ID guide and a dedicated WhatsApp group provides support and the maBMS is coordinated locally by Sérgio Teixeira of Madeira Fauna & Flora. Data will also feed into the eBMS.

Species Recovery Plans were produced for the target species, *Gonepteryx maderensis*, *Pararge xiphia*, *Pieris wollastoni* (click on the species names for finding the pdf) together with a short project video which can be accessed at More information about the project can be found in our website.

Of course, the report for *P. wollastoni* is not a 'recovery plan' at all, but it describes what is known about this species. Extinction happened very quickly, probably the result of an introduced virus or possibly parasitism. Its demise is a reminder that island endemics are amongst our most vulnerable butterfly species and they deserve our continued attention.

Important Butterfly and Moth Areas

By Chris van Swaay, Dutch BC

For the conservation of butterflies and moths, as well as to help policymakers in selecting areas with a high insect biodiversity, it is important to identify and prioritize areas where efforts should be concentrated to preserve butterfly and moth's populations and avoid their decline. In the past, such areas were identified only for butterflies on a European scale using expert knowledge (van Swaay & Warren, 2003, 2006). However, with the increasing amount of data gathered by volunteers, monitoring schemes and scientists, a data-driven assessment supported by expert knowledge is more suitable to openly select important areas for butterflies and moths.

IBMAs are defined as sites of international significance for the conservation of butterflies and moths which should be large enough to safeguard a viable population of a species, but at the same time, should be small enough to be conserved in their entirety. To identify IBMAs, Butterfly Conservation Europe and partners developed a set of robust and standardized criteria based on observational data, which might be applied to any region in the world.

The criteria are divided into two main criteria A) threatened species, and B) species richness, with several sub-criteria for both. A site can be identified as IBMA if it applies to one criterion or more. For the A-criterion on threatened species it is advised to follow the most recent and relevant IUCN Red List for the specific spatial scale at which IBMA's are selected. If such a Red List is outdated, or new information has become available, other relevant publications such as scientific articles for single species can be used to establish regionally threatened species.

To test the criteria, they have been applied on the Netherlands. In total 38 Important Butterfly and Moth Areas were identified, for which six corresponded only for butterflies, ten only for moths and 22 were important for both groups. The average area of the IBMAs is 1,510 hectares. Of the 38 IBMA, 33 (i.e., 87% of all IBMA in the Netherlands) fall within the Natura 2000 network, which provides the best protection for biodiversity in Europe.

Figure 9. Habitat of butterflies in the Netherlands

Challenges and bottlenecks for butterfly conservation in a highly anthropogenic region: Europe's worst case scenario revisited

By Dirk Maes, Research Institute for Nature and Forest (INBO)

The recent decline in insect diversity and abundance and the consequences for associated ecosystem functioning and services have attracted growing attention. Especially highly anthropogenic regions are affected by rapid biodiversity changes including significant losses. Two decades ago, we suggested that Flanders (northern Belgium) was Europe's worst-case scenario for butterfly diversity loss with habitat destruction, fragmentation and nitrogen deposition as major causes (Maes and Van Dyck, 2001). To analyse changes since the second half of the 20th century, we used more than 2.5 million distribution records to calculate trends in distribution during the last three decades. By linking these trends to the species' ecology using multi-species indicators for a set of ecological and life-history traits, we determined the most important drivers policy makers and nature managers should focus on. Species showing the strongest expansion are woodland specialists and polyphagous species. On the other hand, sedentary species of nutrient-poor biotopes such as heathlands and semi-natural grasslands showed a decreasing trend, despite the ongoing policy focus and conservation efforts. We discuss our results with regard to challenges and bottlenecks for the conservation of butterflies and other insects in anthropogenic regions.

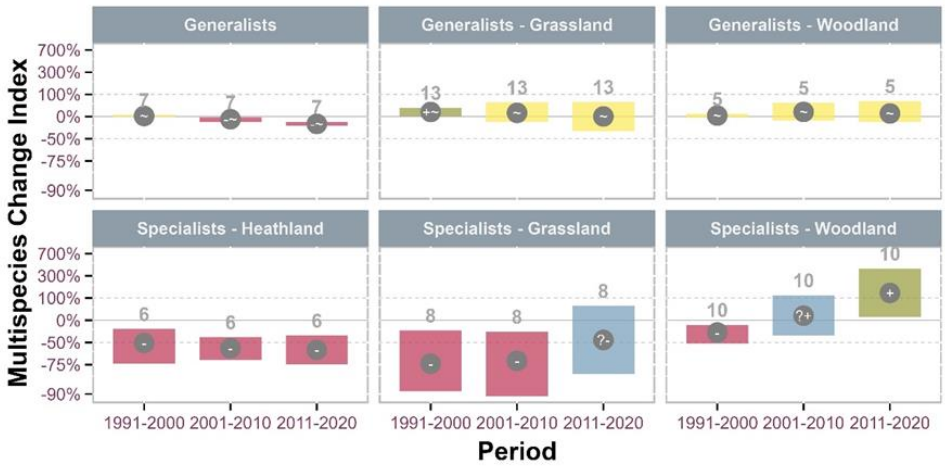

Figure 10. Graphical abstract

Multispecies Change Indices (MSCI ± se) for biotope preference of butterflies in three decades compared to a reference period (1951-1990). On average, specialist species of heathlands showed a continuous decline compared to the reference period 1951-1990. Specialist species of woodlands, on the other hand, showed a continuous increase since the period 1951-1990. The dashed lines indicate the (arbitrary) thresholds for increases (+100%) or decreases (-50%) compared to the reference period 1951-1990. The figures in grey indicate the number of species in each period and each biotope class. The grey dots indicate the mean MSCI and the trend is given in white in the dots: + = increase, +~= moderate increase, ~ = stable, -~= moderate decrease, - = decrease, ?+ = potential increase, ?- = potential decrease.

Source: Maes D, Van Calster H, Herremans M & Van Dyck H (2022) Challenges and bottlenecks for butterfly conservation in a highly anthropogenic region: Europe's worst case scenario revisited. Biological Conservation 274 (B): 109732. **https://doi.org/10.1016/j.biocon.2022.109732**.

Influencing European policies

By Sue Collins, European Environmental Policy Advisor, BC Europe and Aidan Whitfield, Policy Advisor, BC Europe.

During 2022 Sue and Aidan have continued to provide advice, on behalf of BCE, to the EU Commission, EU Member States and others, on European policy issues affecting butterflies, moths, other insect pollinators and their habitats and on EU policy implementation. We have been assisted in this work by Holly Mynott, International Officer, BC (UK).

Working with other NGOs

We have continued to work closely with colleagues from other European environmental NGOs, principally through Sue being the Vice Chair of the European Habits Forum (EHF), which meets regularly with DG Environment to discuss development of EU policy and advise on how to improve implementation. Aidan and Holly provided support by attending on-line EHF meetings when Sue was not available. Sue will step down as EHF Vice-Chair in January 2023, but BCE will continue to be an active member of the EHF.

EU Biodiversity Strategy 2030 (EU BDS 2030)

We have continued to support the Commission on implementation of the EU BDS 2030, by promoting the use of butterfly monitoring data, trends, indicators and other butterfly metrics. The BCE EU Grassland Butterfly Indicator is one of the key Indicators included on the EU Biodiversity Strategy Dashboard https://dopa.jrc.ec.europa.eu/kcbd/dashboard/.

Sue has worked with BCE Board Members to show the Commission how the EU BDS targets can be an opportunity to improve protection for butterflies. Simona Bonelli has developed an example based on improving Protected Areas for the Alpine region and Chris van Swaay has developed a methodology for new maps of Important Butterfly Areas, starting with a project in the Netherlands.

One of the commitments in the EU BDS 2030 is to prevent deterioration of EU Habitats Directive listed species and improve the status trend for at least 30% of these by 2030. The EU has set up a "Pledge" process to track these commitments and those to increase Protected Areas, including better protection for Red Listed species. To support the Pledge process, we set up, with DG Environment (within the frame of the EU Natura 2000 Biogeographic Region Management Networking) an on-line 2-day networking event in March 2022.This facilitated knowledge sharing on butterflies and their habitats and how to sustain and improve their conservation and reverse declines, with discussions between BCE and partners and EU Member State officials responsible for delivering their contributions to meeting these EU BDS targets. https://www.vlinderstichting.nl/butterfly-conservation-europe/eu-policy-and-butterflies/eu-biodiversity-strategy-2030-targets/target-and-pledges Member States are due to submit written "Pledges" to DG-Env detailing the measures they will take. There will be Seminars, including stakeholders and MSs and the Commission, during 2024, to review the quality and sufficiency of these.

Membership of the new EU Biodiversity Platform (EU BP) and discussions in meetings

In February 2022, BCE applied to be a member of the new governance process - the EU Biodiversity Platform (EU BP) - for reviewing implementation of the EU BDS 2030 and stimulating action. This EU mechanism involves EU Commission, EEA, JRC, Member States and Stakeholders and replaces CGBN, which Sue participated in for several years as Vice Chair of EHF, representing NGOs. BCE is now

accepted, in its own right, as a full Stakeholder member of the EU BP and its Expert subgroups**,** including the Expert Groups on Pollinators and on Monitoring and Assessment of Ecosystems.

Sue and Aidan have participated in EU BP meetings during 2022, discussing progress with EU BDS 2030 implementation, including financing biodiversity and tracking spend; the draft EU Nature Restoration Law; EU Climate policy; the new EU Knowledge Centre for Biodiversity (KCB); greening urban areas; and the EU Pollinators Initiative. Holly attended a meeting in Brussels on Ecosystem assessment and monitoring, at which she promoted the case for better funding of eBMS Citizen Science monitoring. Dr Nigel Bourn, BCE Board Member participated in the EU Nature Directors' meeting in Prague in September.

EU Pollinators initiative

The original EU Pollinators Initiative was published in 2018 and it was revised during 2022. BCE provided advice to the European Commission through discussions with DG Environment; submitting a response to the EU Public Consultation on Revision of the EU Pollinators Initiative; participating in Workshops on Protected Areas and on the Effects of agriculture on pollinators; and presenting on Citizen science monitoring at EU Pollinators Week, September 2002, on priorities for the revised Initiative.

Sue and Matt Shardlow, Buglife, coordinated the EHF Working Group on pollinators, developing and publishing an EHF position paper with analysis and recommendations. As BCE member of the EU Expert Group on Pollinators Sue participated in 3 meetings with Member States officials to help them prioritise the actions to be included in the revised Initiative. The revised Initiative, A New Deal for pollinators, was published in January 2023.

EU Nature Restoration Law (NRL)

We continued to support the Commission in preparing the NRL and they published their draft proposals for an EU Nature Restoration Law as an EU Regulation in June 2002. It includes:

1. A binding commitment at EU level to reverse declines in wild insect pollinators by 2030
2. Expects well managed Protected Areas (PAs) to cover 30% of EU area by 2030 – an increase compared to current coverage and needs a big improvement in effective management.
3. Aims for PAs with Strict Protection to cover 10% of EU area by 2030 to maintain or restore their quality. The definition includes Old Growth Forests (with no intervention) and Biodiverse rich Semi-natural grassland which do require management.
4. A requirement on MSs to monitor biodiversity outcomes and to use the Grassland Butterfly Index as a proxy Indicator for agroecosystems.
5. A requirement to prepare MS Nature Restoration Plans and fund measures. The adequacy of these plans will be reviewed by the EU Commission
6. Implementation of a more connected and effective trans-European Nature Network to increase ecosystem resilience and help restore biodiversity.

Aidan prepared the BCE response to the EU consultation on the proposed EU Nature Restoration Law and submitted it in August 2022. Discussions about the importance of the proposed binding commitment to reverse the decline in pollinators and supporting field monitoring also took place with Martin Hosek, MEP. The NRL proposals are currently in Trialogue negotiations between the Environment Council of MSs, the EU Parliament and the EU Commission. The timetable for the new legislation is that it might be agreed and adopted by late 2023/early 2024.

EU Forestry Strategy

The EU published a new EU Forestry Strategy early in 2022 and in August it issued a consultation on the new EU Framework for Forest Monitoring and Strategic Plans. Aidan and Sue prepared the BCE response to this and submitted it in November 2022.

The Commission is producing three guidelines related to forests as required under the EU Biodiversity Strategy:

a. Defining primary and old-growth forest
b. Defining close-to-nature forestry
c. Defining biodiversity-friendly afforestation and reforestation

The Commission provided drafts of the guidelines to EHF at a meeting of the Working Group on Forests and Nature (WGFN). Aidan provided comments on the 'Closer to nature forestry' guidelines and links to the Butterfly Conservation (UK) documents on woodland management as case studies of best practice.

EU Agriculture Policy and Practice: CAP Strategic Plans

The revised EU Common Agriculture Policy, for 2023/2027, includes more delegation to EU Member States https://agriculture.ec.europa.eu/common-agricultural-policy/cap-overview/new-cap-2023-27_en. MSs prepared their draft **CAP Strategic Plans** in the Spring. The EU Commission required improvements in the environmental ambition and measures for biodiversity in these plans (which were mostly judged as of poor quality in this respect, including for pollinator recovery). Revised plans are being finalised. https://agriculture.ec.europa.eu/cap-my-country/cap-strategic-plans_en.

Biodiversa+ Call on Biodiversity Monitoring

Biodiversa+ is the European co-funded biodiversity partnership supporting excellent research on biodiversity with an impact for policy and society**.** It was jointly developed by BiodivERsA and the European Commission (DG Research & Innovation and DG Environment) and was officially launched on 1 October 2021.

Simona Bonelli, as lead project coordinator, Cristina Sevilleja and Sue, together with colleagues and BCE partners, developed a bid to the EU Biodiversa + Call BIOMON for projects on biodiversity monitoring and more use of data. We put together a consortium of 12 Partners across the EU and Turkey, together with CEH, BCE, Dutch Butterfly Conservation and Butterfly Count App support. The project is called **ENABLING** – "**E**valuating **N**atura and **A**griculture through **B**utterf**L**y monitor**ING** across Europe. We have been invited to Stage 2 of the process and the final bid application is required by 5 April 2023. If the bid is successful, the project could start in Feb 2024 and last three years into 2027.

LIFE project

Aidan attended the EU LIFE Apollo 2020 Project kick-off conference in Jelenia Góra, Poland in September 2022 and gave a presentation covering eBMS, the ABLE and SPRING projects and EU legislation, including the proposed Nature Restoration Law. The project aims to re-introduce the Apollo butterfly *Parnassius apollo* to sites in Poland, Czechia and Austria.

European Butterflies Group

By Mike Prentice, Chair, EBG

EBG European Butterflies Group is a "virtual" branch of Butterfly Conservation for those members who have a particular interest in European butterflies and moths. EBG regularly organises surveys to assist with the conservation of particularly endangered species and cooperates with Butterfly Conservation Europe in encouraging members to record and monitor whether regularly or on a casual basis when abroad.

Although the worst effects of the pandemic were over by 2022 our fieldwork efforts were still somewhat curtailed. Our focus in recent years has been mainly on 3 particularly threatened species Danube Clouded Yellow *Colias myrmidone*, Spanish Greenish Black-tip *Euchloe bazae* and Dils' Grayling *Pseudochazara orestes*. In April we resumed our survey work on Spanish Greenish Black-tip revisiting the sites of the northern population *E. bazae iberae* . Although we found numerous adults in their known range, we were unable to find any in an area which contained plenty of the larval foodplant and which we had hoped might also host a previously undiscovered colony.

A trip to northern Greece in search of *P. orestes* was also unsuccessful: a group spent a week searching the known sites for this rare endemic without any success. The area has been subject to some changes with an increase in quarrying and a reduction in grazing but whether this accounts for what appears to be a reduction in *P. orestes* numbers is unknown at this stage.

In 2023 we plan to visit Romania to look for *Colias myrmidone*. The first visit is taking place at the end of May and the second visit will be timed to coincide with the second (and more numerous) brood in August/September. Our task in Romania is to see whether we can find new populations using maps based on predictive models produced by colleagues in Germany and the Netherlands. The first trip will concentrate on the area in Transylvania to the west and south-west of Cluj-Napoca in the Apuseni.

We are also hoping to organise surveys in July for Nevada Grayling *Pseudochazara williamsi*. This species is endemic to southern Spain and there is growing concern that it is in serious decline. We aim to send a team from European Butterflies Group to work with our friends and colleagues in Andalusia to survey for the species.

Figure 11. Nevada Grayling *Pseudochazara williamsi* (Photo: Mike Prentice)

Website

We are continuing to update the BC Europe website, including project information done by BCE, and colleagues and promoting butterfly conservation actions, policies and monitoring. We are grateful to De Vlinderstichting for hosting our new site, which will hopefully be far more secure.

Social media

Our social media following continues to grow steadily: our Facebook page now has over 3,800 followers (www.facebook.com/ButterflyConservationEurope) and our Twitter (@europebutterfly) account has grown to over 2,800 followers. We are very grateful to Cristina Sevilleja and Sue Collins for running these accounts.

Acknowledgements

We are very grateful for the ongoing financial support of Butterfly Conservation (UK) and Dutch Butterfly Conservation (De Vlinderstichting). We would also like to thank the Board and Partners of BC Europe who give their time freely.