



EU POLLINATORS INITIATIVE

A review of Member States actions to tackle the decline of wild pollinators



STRATEGY



INITIATIVES



Rural



Urban



Private sector



NATIONAL RED LISTS

Threatened species



21%

Butterflies [2017]



RAISING AWARENESS



Citizens



Schools children



Farmers & beekeepers

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There are no national or regional strategies for wild pollinators in Bulgaria. The scientific and NGO community developed a draft strategy for the protection of pollinators in nature. It was not endorsed by the relevant state institutions and it has not been adopted yet.

There is limited research on wild pollinators and there is not enough recognition of the importance of the issue at governmental level. However, there are indications that the Bulgarian pollinator fauna is very species rich. A check list of Bulgarian butterfly species published in 2017 lists 215 species, of which 46 (21%) are considered threatened (Vulnerable, Endangered or Critically Endangered). There is a monitoring system in place for biodiversity, but it does not include pollinators (other than the EU protected species). Guidance for the monitoring and assessment of status of butterflies and moths are available online.

*Bulgaria has a national action plan for *Ophrys insectifera* (2014 – 2023), an orchid that is only pollinated by male flies of specific species. Two butterflies (*Colias balcanica* and *Erebia rhodopensis*) are protected at the national level (in addition to the species already protected by EU legislation).*

No initiatives to raise awareness about wild pollinators or initiatives aimed at protection of wild pollinators were identified.



STRATEGIES FOR WILD POLLINATORS OR ANY OTHER SIMILAR PLANS

There is no specific strategy focusing on wild pollinators in Bulgaria.

The [National Strategy for Biodiversity](#) barely mentions pollinators in relation to ecosystem services.

A draft 'Strategy for the protection of the main pollinators in the nature - the bees and their sustainable development' was mentioned in an [open letter](#) from Joint Genomic Centre, The National Scientific Bees Association, and the Association of Bulgarian Beekeepers to the Minister of Agriculture, Food and Forestry (MAFF). The letter makes reference to available research and to the European Commission Communication on EU initiative on pollinators. The authors of the letter argue that honey bees and wild pollinators need targeted protection and advocate for actions in accordance with the EU Pollinators Initiative. They call for recognition of the importance to protect all pollinators. The draft of the strategy was devised within a project implemented by the Confederation of the Bulgarian Beekeepers. It was, reportedly, amended and supported by main national and regional beekeeping associations, biodiversity and nature protection organisations. It was noted in this [letter](#) that the above-mentioned draft strategy was submitted to the Minister on February 16, 2018. The authors are seeking a meeting with the government.

The Ministry of the Environment and Water have published a list of nationally protected species in Annexes 2, 3 and 4 of the [Law on Biodiversity](#), available at the Ministry of Environment and Water [website](#). The list includes all the pollinator species protected by the EU Habitats Directive plus *Colias balcanica* and *Erebia rhodopensis*. It is unclear when the list was published or when it was last updated.

There is a national programme for apiculture for 2017 to 2019 ([НАЦИОНАЛНА ПРОГРАМА ПО ПЧЕЛАРСТВО](#)). This programme sets out the financial scheme available to provide support to beekeepers in Bulgaria. It does not include measures with direct reference to or effect on wild pollinators. One of the measures of the programme is to a certain extent relevant since it ensures financial support to research on the different factors that have an impact on the population, genetics and health of honey bees.

The new apiculture programme for the 2020 to 2022 period is being developed. A committee is set up by the government, including representatives of the major beekeepers unions and scientific institutions for the development of the new programme.



IMPROVING KNOWLEDGE OF POLLINATOR DECLINE, ITS CAUSES AND CONSEQUENCES

RED LISTS ON POLLINATORS AND DATA ON POLLINATOR POPULATIONS

Bulgaria published a national Red Book of species threatened with extinction, most recently in 2011 (Golemanski et al 2011), including threat status assessments of the taxonomic group Lepidoptera that includes pollinators. It does not cover Hymenoptera or Diptera, so there are no red list assessments of bees or hoverflies in Bulgaria. A checklist of the butterflies of Bulgaria (Lepidoptera superfamilies Hesperioidea and Papilionoidea), with application of the IUCN Red List criteria, was published in 2017 (Hristova and Beshkov 2017). It lists 215 species, of which 46 (21%) are considered threatened (Vulnerable, Endangered or Critically Endangered) based on the IUCN criteria.

A recent publication (Rusch & Dahle 2017) concluded that Bulgaria has at least 387 bee species in the following families: Andrenidae (68 species from 4 genera), Apidae (144 species from 17 genera), Colletidae (10 species from 2 genera), Halictidae (79 species from 6 genera), Megachilidae (73 species from 15 genera), Melittidae (13 species from 3 genera).

The websites of the [national nature protection service](#) and the Bulgarian [portal for biodiversity](#) do not contain relevant information on the status and trends of wild pollinators.

Some non-governmental websites provide information on pollinator species, including:

- [Butterflies of Bulgaria](#)
- [Butterflies and moths in Bulgaria](#)
- [Prime butterfly areas in Bulgaria](#)

The European Red list of Bees (Nieto et al 2014) states that there are not enough data available on pollinator populations and distribution in Bulgaria. Scientific research on the issue is scattered (see below).

POLLINATOR MONITORING SCHEMES

The [national system for monitoring of biodiversity](#) is managed by the Bulgarian Executive Environment Agency. The agency maintains an [information system](#) which provides access to national and regional [databases on biodiversity](#). [Biodiversity monitoring](#) and planning is made available online annually. However, only the invertebrates on the EU Habitats Directive are included in the [national level monitoring](#).

The Environment Agency provides practical [guidance for invertebrate monitoring](#). With regard to pollinators, there is [guidance on monitoring of butterflies and moths](#) and for assessing the status of these species.

Honey bees are closely monitored and the Ministry of Agriculture and Food provides up to date honeybee hive statistics (most recently for [2017](#)).

RESEARCH INITIATIVES

The Institute of Biodiversity and Ecosystem Research at the Bulgarian Academy of Sciences produced a national scale spatial model of crop pollination as an ecosystem service, using the ESTIMAP tool developed by the European Joint Research Centre (Zulian et al 2017, (Rusch & Dahle 2017).

Scientific publications are available on the populations and habitats of some relevant species. However, the scientific research is scattered and hard to locate online. The available research is not currently used to inform policy development and decision-making on the protection of wild pollinators. No sufficient recognition is yet given to the importance of the issue at governmental level.

Some relevant studies have been published in English recently:

- National Museum of Natural History published a checklist of the 215 butterfly species (Lepidoptera: Hesperioidea and Papilionoidea) recorded in Bulgaria (Hristova and Beshkov 2017).
- Pollination services in Bulgarian rural landscape project report (Rusch and Dahle 2017) as part of the “Ecosystem Services Mapping and Biophysical valuation (MetES Map)” project.
- Institute of Forage Crops, Pleven, Bulgaria and Syngenta Bulgaria (Nikolova et al 2016): This study recorded bee visitors to different flowering forage crops (birdsfoot trefoil, alfalfa, sainfoin, and a mixture phacelia, alfalfa, sainfoin, red clover and cocksfoot) in the Pleven region. The study found 5 species of wild bee were the dominant visitors in sainfoin, alfalfa, and mixed crops (*Halictus quadricinctus*, *H. maculatus*, *Eucera longicornis*, *Andrena falsifica* and *A. dorsata*). Wild bee density on the crops was significantly influenced by temperature and relative humidity, with higher bee activity in the morning than at midday.
- Institute of Environmental Biology, Kazimierz Wielki University, Poland (Banaczak and Dochkova, 2014). This study recorded the occurrence of bee species visiting crops (alfalfa, oilseed rape, sunflower, radish) and refuge habitats (meadows, field and ditch margins, road and rail verges) in the Pleven region between 1985 and 1991 and in the Plovdiv (Upper Thracian Plain) region in 1990 - 1992. Researchers recorded a total of 232 wild bee species plus honeybees. In the Pleven region, they found 204 bee species, so together with 44 species reported earlier by other authors, this increased the total number of bee species recorded in the Pleven region to 248 species. They also recorded 112 species in the Plovdiv region.

TAXONOMICAL EXPERTS ON POLLINATORS

There are taxonomical experts on wild pollinator taxonomic groups (Hymenoptera, Diptera, Lepidoptera) within the Bulgarian Academy of Sciences and other research institutes. There is a

searchable [database of experts](#) on the Bulgarian portal for biodiversity. It includes experts specialised in invertebrates and insects (independent or affiliated with scientific institutions) and lists of relevant institutions on selected topics.



INITIATIVES TACKLING THE CAUSES OF POLLINATOR DECLINE

ACTION PLANS ON SPECIES AND HABITATS

Bulgaria has a national action plan for [Ophrys insectifera \(2014 – 2023\) \(MOEW 2014\)](#), an orchid that is only pollinated by male flies of specific species. It was developed by the Institute of Biodiversity and Ecosystem Research in the Bulgarian Academy of Science. This species is included in Annex 3 of the Law on biodiversity. Recent research describes the distribution of this species in Bulgaria (Zahariev and Taneva, 2017).

Other species action plans for the Biodiversity Law Annex 3 listed species might be available but were not found online. In addition, there are a number of plans devised for protected territories, habitats and Natura 2000 sites. These are not considered within the prime focus of this study.

FARMER AND LANDSCAPE INITIATIVES, AS WELL AS LOCAL LEVEL STRATEGIES

None identified.

MEASURES ON PESTICIDES

The National Action Plan on the Sustainable Use of Pesticides announces the following measures under the SUPD Article 12, which are expected to reduce the impact of pesticides on biodiversity and natural habitats, including soil biodiversity, non-target organisms, bees, etc.:

- Ban on the use of professional-category plant protection products in areas used by the general public or vulnerable groups, defined in Article 3 of Regulation (EC) No 1107/2009, such as public parks and gardens, sports and recreational areas, areas adjacent to schools and playgrounds, and areas located in the immediate vicinity of health care institutions (responsible agencies BABKh, municipalities, local authorities). If these areas need to be treated, plant protection products of the non- professional use category, low-risk plant protection products or organic agents are to be used.
- Ban on the use of pesticides in specified districts, including certain protected territories, and pastures and meadows in some zones in the Natura 2000 network (responsible agency: MOSV).

- Implementation of supplementary measures to protect bees from pesticide poisoning.

No information was available on whether there has been any action to implement these measures.



RAISING AWARENESS, ENGAGING SOCIETY-AT-LARGE AND PROMOTING COLLABORATION

TRAINING AND AWARENESS RAISING CAMPAIGNS

None identified.

EDUCATIONAL CAMPAIGNS AND MATERIALS ON WILD POLLINATORS

None identified.

CITIZEN ENGAGEMENT CAMPAIGNS

None identified.

PRIVATE SECTOR INITIATIVES FOR WILD POLLINATORS

None identified.

APICULTURE SECTOR INITIATIVES FOR WILD POLLINATORS

None identified.

REFERENCES

- Banaszak, J. and Dochkova, B., (2014), Bees (Hymenoptera, Apoidea, Apiformes) in the agricultural landscape of Bulgaria: species diversity. *Journal of Apicultural Science* No 58 (1), 29-49
<https://www.degruyter.com/downloadpdf/j/jas.2014.58.issue-1/jas-2014-0003/jas-2014-0003.pdf>
- Golemanski et al (2011) Red Data Book of the Republic of Bulgaria. Volume 2 - Animals. Annex 1.1 List of the species assessed as "near threatened", "least concerned" and "data deficient". <http://ecodb.bas.bg/rdb/en/vol2/appendix1.1.html>
- Hristova, H. and Beshkov, S. (2017) Checklist of the Superfamilies Hesperioidea and Papilionoidea (Insecta: Lepidoptera) of Bulgaria, with Application of the IUCN Red List Criteria at National Level. <http://acta-zoologica-bulgaria.eu/downloads/acta-zoologica-bulgaria/2017/69-1-105-114.pdf>
- Kolev Z (2017) *Rubrapterus bavius* (Eversmann, 1832), a butterfly genus and species new to Bulgaria (Insecta, Lepidoptera, Lycaenidae). *ZooNotes* 114:1–4
- Kolev Z, Shtinkov N (2016) The Pygmy Skipper *Gegenes pumilio*: a new species to Bulgaria, and a confirmation of its occurrence in the eastern Balkan Peninsula (Lepidoptera: Hesperidae). *Phegea* 44(1):16–22
- Kolev Z, Tsvetanov T (2018) Clarifications and new data on the distribution of *Cacyreus marshalli* Butler, 1898 in Bulgaria (Insecta, Lepidoptera, Lycaenidae). *ZooNotes* 122:1–4
- MOEW (2014) План за действие за опазване на Муховидната пчелица 2014-2023 [national action plan for *Ophrys insectifera*]. Developed by the Institute of Biodiversity and Ecosystem Research in the Bulgarian Academy of Science. Ministry of Environment and Water, Bulgaria. [https://www.moew.government.bg/wp-content/uploads/file/Nature/Biodiversity/Protected specie/Action Plans/AP PLANTS/PD2015/AP Ophrys insectifera 2014-2023 FINAL.doc](https://www.moew.government.bg/wp-content/uploads/file/Nature/Biodiversity/Protected%20specie/Action%20Plans/AP%20PLANTS/PD2015/AP%20Ophrys%20insectifera%202014-2023%20FINAL.doc)
- Nieto et al (2014) European Red List of Bees. Publication Office of the European Union, Luxembourg.
- Nikolova, I., Georgieva, N., Kirilov, A. and Mladenova, R. (2016) Dynamics of dominant bees – pollinators and influence of temperature, relative humidity and time of day on their abundance in forage crops in Pleven Region Bulgaria. *Journal of Global Agriculture and Ecology* 5(4): 200-209
[https://www.researchgate.net/publication/303091657_DYNAMICS_OF_DOMINANT_BEES - POLLINATORS AND INFLUENCE OF TEMPERATURE RELATIVE HUMIDITY AND TIME OF DAY ON THEIR ABUNDANCE IN FORAGE CROPS IN PLEVEN REGION BULGARIA](https://www.researchgate.net/publication/303091657_DYNAMICS_OF_DOMINANT_BEES_-_POLLINATORS_AND_INFLUENCE_OF_TEMPERATURE_RELATIVE_HUMIDITY_AND_TIME_OF_DAY_ON_THEIR_ABUNDANCE_IN_FORAGE_CROPS_IN_PLEVEN_REGION_BULGARIA)
- Rusch, Graciela M. and Dahle, Sondre (eds) (2017) Pollination services in Bulgarian rural landscapes. NINA, IBER, ReSAC and JRC project report.
- Zahariev, D. and Taneva, L. (2017) New locality of *Ophrys insectifera* L. in Bulgaria. *International Journal of Scientific Engineering and Applied Science (IJSEAS)* 3(8), <http://ijseas.com/volume3/v3i8/ijseas20170809.pdf>
- Zulian et al (2017) Pollination services spatial model adapted to Bulgarian rural landscapes. [http://www.metecosmap-sofia.org/wp-content/uploads/2017/02/Zulian-et-al Polination.pdf](http://www.metecosmap-sofia.org/wp-content/uploads/2017/02/Zulian-et-al%20Polination.pdf)

Educational materials

Not available.