



The LifeWatch ERIC Biodiversity
& Ecosystem eScience Conference
PLOVDIV, BULGARIA 7-10 JULY 2026

"The Race against Extinction: Protecting Flora and Fauna before it's too late"

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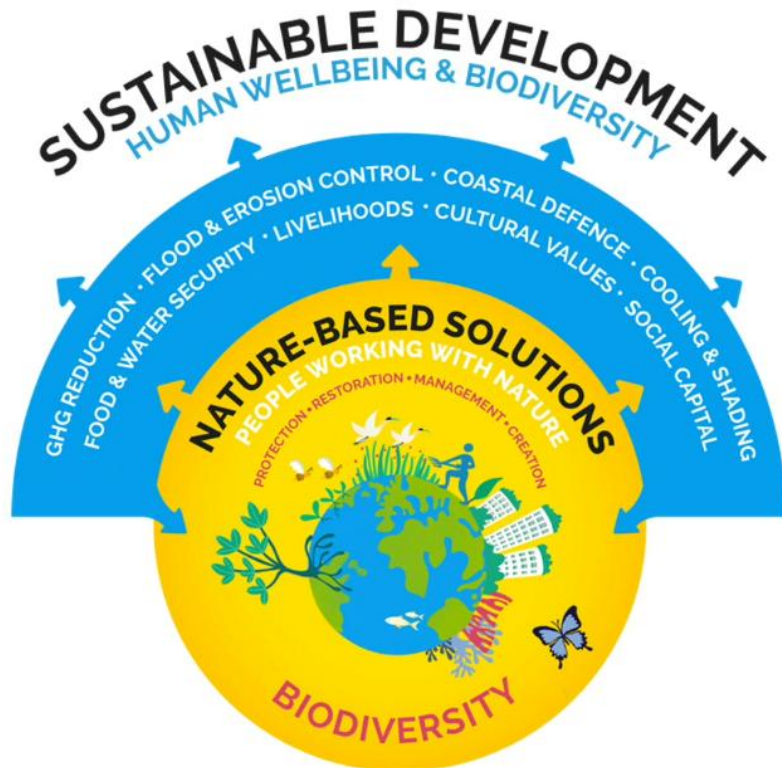
08 July 2026





“In our hands now lies not only our own future, but that of all other living creatures with whom we share the Earth.”

David Attenborough



From: University of Exeter

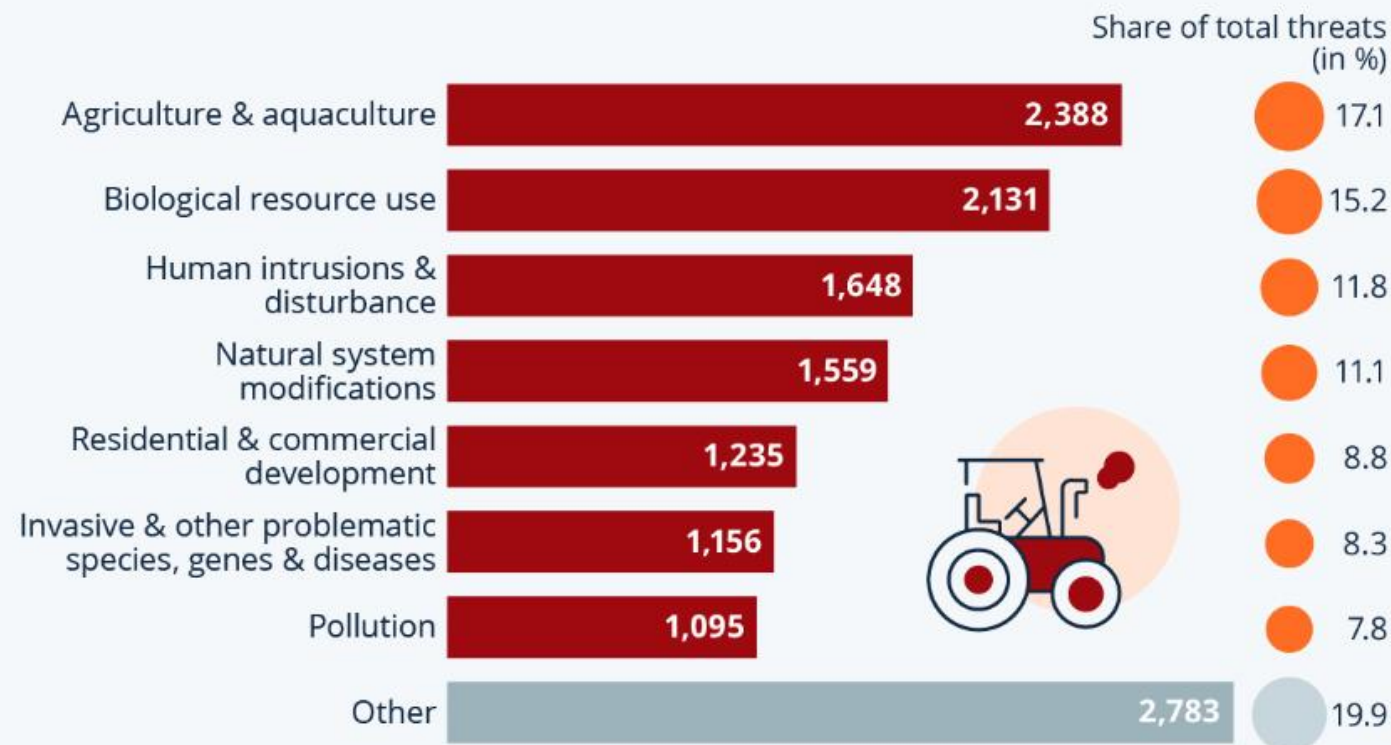
Biodiversity encompasses the multitude of living organisms on Earth and the ecological interactions that sustain ecosystem functioning.

Europe has a rich diversity of wild plant and animal species, including numerous endemic species.

Despite its fundamental role in supporting human well-being, biodiversity is rapidly declining.

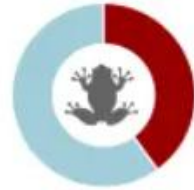
The Biggest Threats to Biodiversity on Earth

Number of key biodiversity areas identified as experiencing the following threats* worldwide as of Sep. 2024



One in four species are at risk of extinction

Species assessed by the IUCN Red List



Amphibians

40%



Conifers

34%



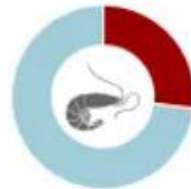
Reef corals

33%



Sharks and rays

31%



Selected crustaceans*

27%



Mammals

25%



Birds

14%

*Assessed species include lobsters, freshwater crabs, freshwater crayfishes and freshwater shrimps

Source: IUCN Red List of Threatened Species

BBC

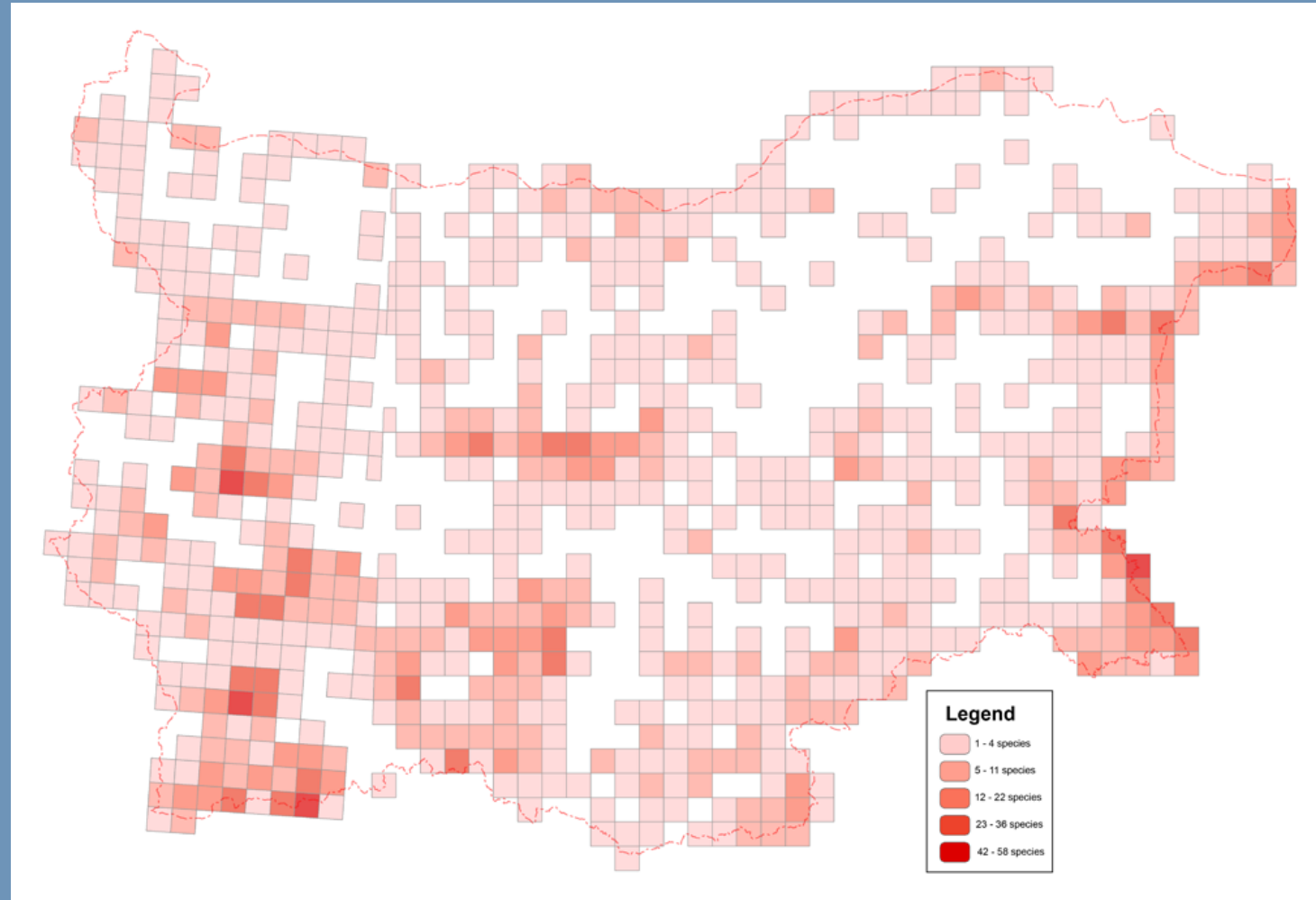
The Republic of Bulgaria ranks among the top five countries in Europe for biodiversity. Although small in area, the country's territory includes parts of 3 biogeographical regions: Alpine, Black Sea, and Continental. The diverse relief, geology, specific microclimatic conditions, and millennia of human activity determine the rich diversity of species, communities, and natural habitats, a large part of which is of conservation importance.

The country has a diverse terrain, including big rivers, a sea, high mountains, vast plains and foothills, which altogether is a prerequisite for a wide variety of natural habitats and ecosystems.

93 types of natural habitats that are a priority for conservation within the European Union have been identified in Bulgaria.

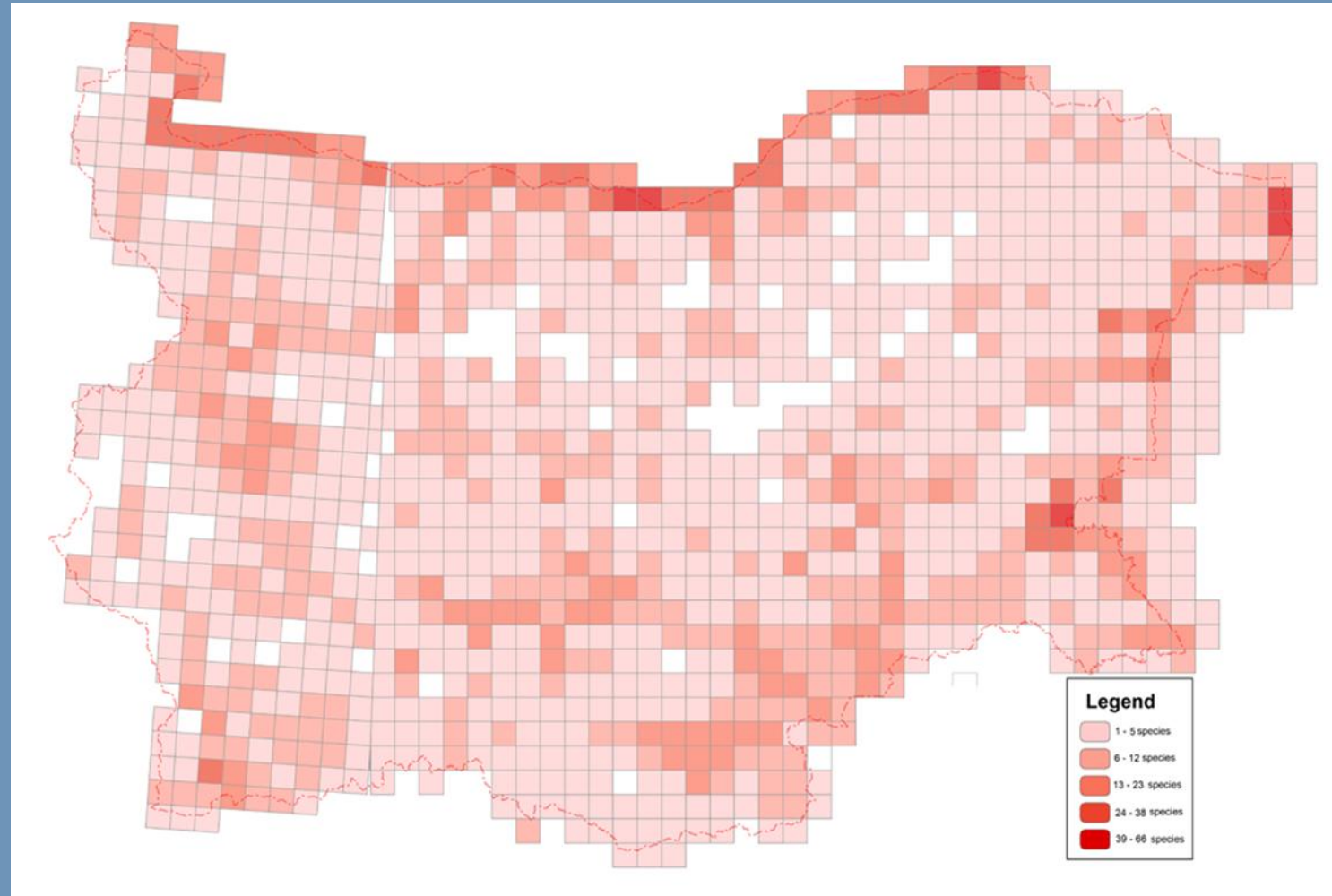
- The number of seed plant species is over 3,900.
- Mosses in Bulgaria are represented in two large groups - Bryophyta and liverworts (Marchantiophyta), with a total number of 756 species.
- Bulgarian algae flora includes about 5,500 species.
- Regarding fungal organisms, 4,815 species have been identified in Bulgaria, with the potential number estimated at 20,670.
- The number of identified animal species is about 30,000, with a potential total of 60,000 species.

Distribution of species and habitats from the Red Data Book and the conservation significance of territories



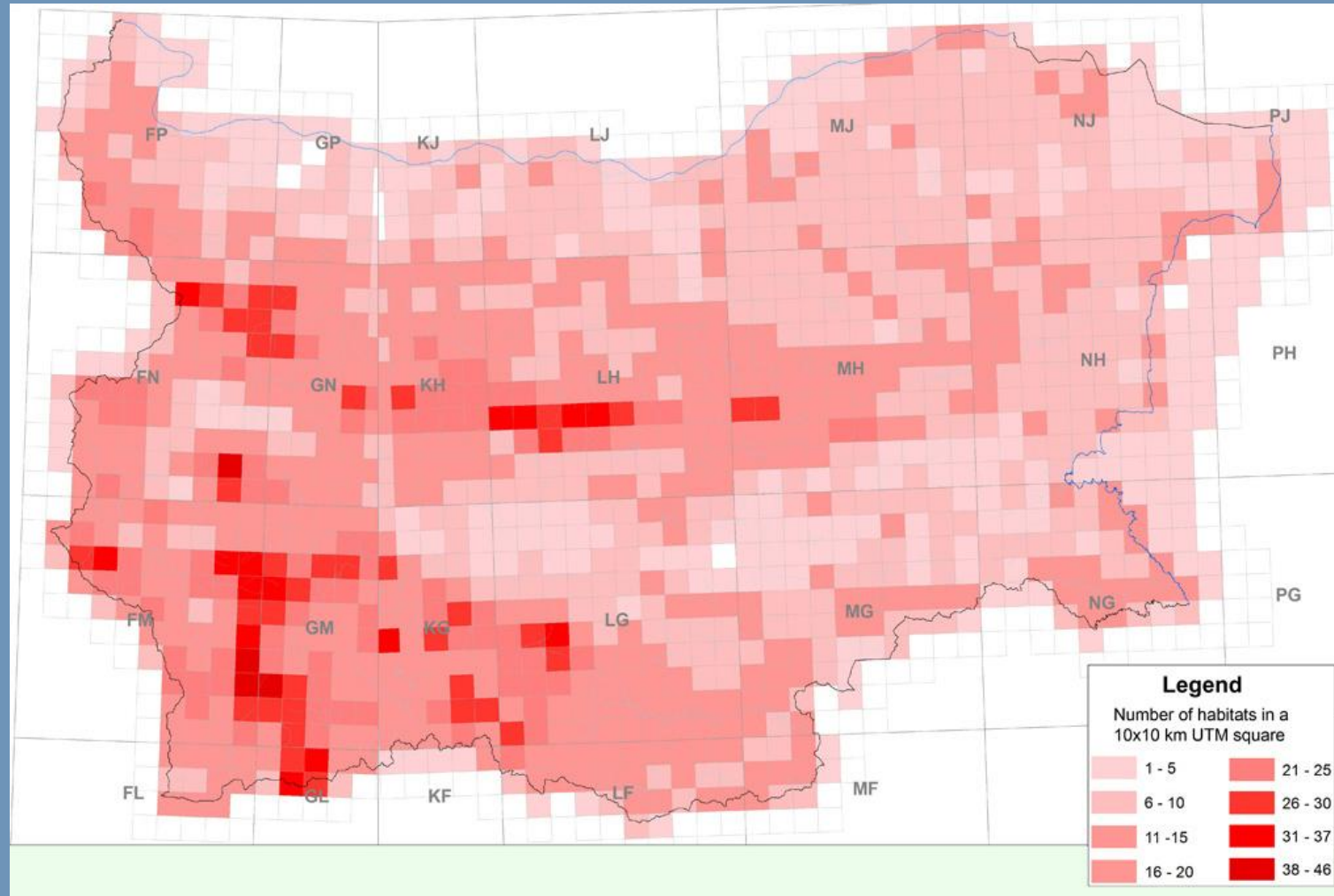
Map of the distribution in the UTM 10 km grid of the plant and fungal species

Distribution of species and habitats from the Red Data Book and the conservation significance of territories



Map of the distribution according to a UTM 10 km grid of the animal species

Distribution of species and habitats from the Red Data Book and the conservation significance of territories



Map of distribution according to UTM 10 km grids of the natural habitats

In recent years, there has been an increasing recognition of the role that reintroduction programmes can play in species conservation.

Nowadays, the Bulgarian nature conservation community appears to be the leader in the reintroduction of conservation-dependent species in Eastern Europe, with more than 20 recent programmes involving birds, mammals, fishes, reptiles, various invertebrates, and plants. The restoration projects for species such as Griffon Vulture, Cinereous Vulture, Lesser Kestrel and Saker Falcon are pioneers in Eastern Europe. These projects are carried out by the Green Balkans NGO and partners.

LESSER KESTREL (FALCO NAUMANNI)

“Life for Lesser Kestrel” LIFE19 NAT/BG/001017



3 active colonies in 2026

- Levka, Svilengrad Municipality
- Stara Zagora
- Kliment, Karlovo Municipality

Released birds + fledged chicks from nest boxes in the colony					
	2021	2022	2023	2024	2025
Levka	79	86	80	74	121
Stara Zagora	33	57	92	114	76
Kliment				70	105
Total newly fledged	112	143	172	258	302

Chicks hatched					
	2021	2022	2023	2024	2025
Levka	80	61	59	85	151
Stara Zagora	18	17	33	58	70
Kliment					25
Total hatched chicks	98	78	92	143	246





The release of captive-bred Saker Falcons via hacking appeared to be an appropriate option for restoring the Saker Falcons in a part of their former breeding range.

Number (n) of released Saker Falcons by hacking for the period 2015-2020.

Year	♂/n	♀/n	WRBC/n	Imported/n	Total Released/n
2015	8	11	19	0	19
2016	8	11	7	12	19
2017	6	10	14	2	16
2018	0	6	6	0	6
2019	1	7	8	0	8
2020	4	8	10	2	12
Total/n	27	53	64	16	80

Lazarova I, Petrov R, Andonova Y, Klisurov I, Dixon A (2021) Re-introduction of the Saker Falcon (*Falco cherrug*) in Bulgaria - preliminary results from the ongoing establishment phase by 2020. Biodiversity Data Journal 9: e63729. <https://doi.org/10.3897/BDJ.9.e63729>

GRIFFON VULTURE REINTRODUCTION IN BULGARIA **“VULTURES RETURN IN BULGARIA” LIFE08 NAT/BG/278**



As a result of reintroduction efforts and the release of 153 individuals, the Griffon Vulture (*Gyps fulvus*) has been reproducing successfully again in the Eastern Balkan Mountains since 2016, after more than 40-50 years of absence. In 2020, the local population consisted of some 800 local birds and 80-115 sojourn individuals. Amongst them, 23-25 breeding pairs, located in five different colonies and two more frequently used roosting sites.



Table 1.

Number of released Griffon Vultures by year and by site in the Eastern Balkan Mountains for the period 2007-2020.

*Note: the releases of three birds in 2007 and five in 2009 in Kotlenska Planina SPA were experimental ones for adjustment of the practice and, thus, not considered as such from the official establishment phase.

Year	Eastern Balkan Mountains		Total
	Sinite Kamani Nature Park UTM MH43	Kotlenska Planina SPA UTM MH65	
2007	0	3*	3*
2009	0	5*	5*
2010	7	7	14
2011	12	11	23
2012	19	7	26
2013	8	0	8
2014	16	10	26
2015	3	4	7
2016	4	0	4
2017	11	0	11
2018	4	0	4
2019	11	4	15
2020	7	0	7
Total	102	51	153

Source: Kmetova–Biro E, Stoyanov E, Ivanov I, Peshev H, Marin S, Bonchev L, Stoev IP, Stoyanov G, Nikolova Z, Vangelova N, Parvanov D, Grozdanov A (2021) Re-introduction of Griffon Vulture (*Gyps fulvus*) in the Eastern Balkan Mountains, Bulgaria – completion of the establishment phase 2010-2020. Biodiversity Data Journal 9: e66363. <https://doi.org/10.3897/BDJ.9.e66363>

GRIFFON VULTURES WINTER CENSUS

Bulgaria, 2023

Griffon vultures in reintroduction sites in Bulgaria

NUMBER	SITE
93	Eastern Balkan Mnt.
53	Vrachanski Balkan
50	Kresna Gorge
4	Central Balkan Mnt.

Vultures numbers per site in Bulgaria



Census data from mainland Balkan Peninsula



Data sources: BSPB, FWFF, Green Balkans, BEPF, BPPS, NPD Central Balkan, NPD Sinite Kamani

CINEREOUS VULTURE REINTRODUCTION IN BULGARIA
BRIGHT FUTURE FOR BLACK VULTURE LIFE14 NAT/BG/649

The Cinereous vulture was listed under the “Extinct” category in the Red Data Book of Bulgaria in 1985 and again in the new edition in 2015.

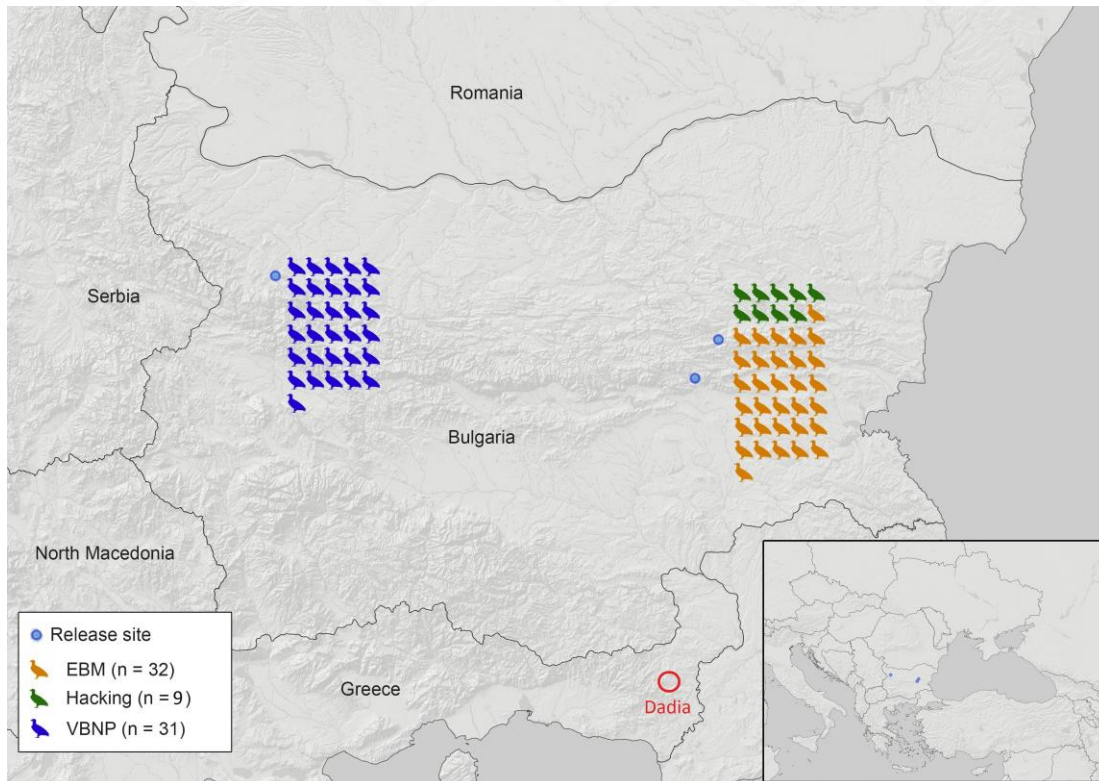
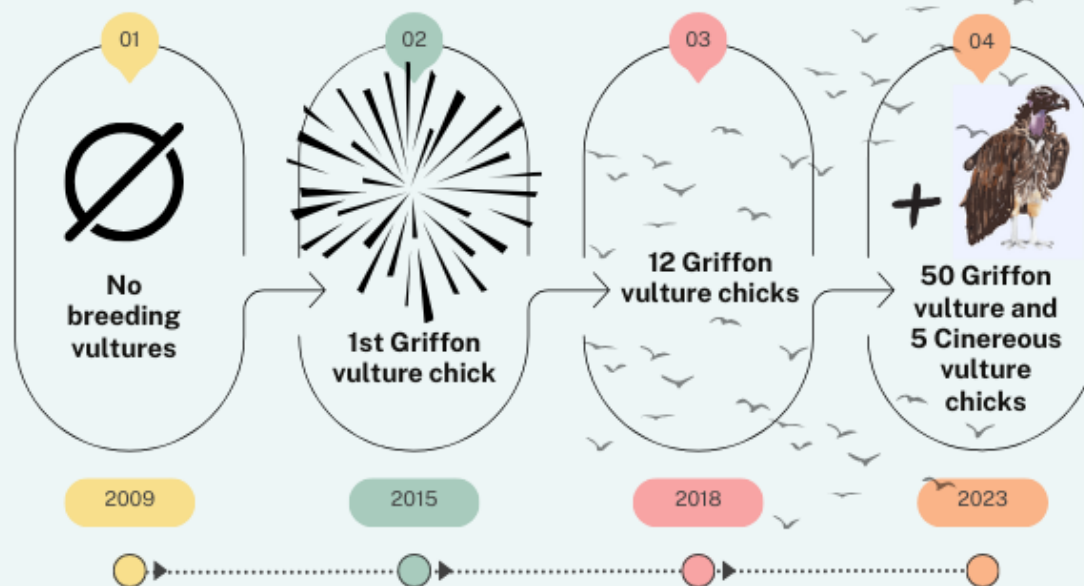


Table 1.

The number of Cinereous Vultures released in the period 2018–2022 in Bulgaria per (sub)site, year and methods used – the numbers in brackets show the number of individuals released by hacking while the rest correspond to individuals released in aviaries.

Year	The Eastern Balkan Mountains		Total EBM	Vrachanski Balkan Nature Park	Total
	Sinite Kamani Nature Park	Kotlenska Planina SPA			
2018	-	(3)	(3)	-	(3)
2019	2 + (2)	9 + (2)	11 + (4)	-	11 + (4)
2020	-	-	-	10	10
2021	5	8	13	10	23
2022	(2)	8	8 + (2)	11	19 + (2)
Total	7 + (4)	25 + (2)	32 + (9)	31	63 + (9)

Thriving Vulture Population in the Balkan Mountains: A Remarkable Growth in Numbers



Created by



with Canva.



The Bearded Vulture – A Symbol of Protected Sites and Areas in Bulgaria



3 BEARDED VULTURES RELEASED INTO THE WILD IN 2025 – BALKAN, BOEV AND LIFE BG



BV LifeBG was lost due to bacterial infection provoked by acute circovirus infection

BV Balkan was returned to GB'WRBC for analyzes and veterinary threatment due to severe feather loss. During the veterinary examination, we found that it was also infected with circovirus

BV Boev fledged successfully.



SEASON 2026 IN WRBC

TWO BREEDING PAIRS AND ONE YOUNG PAIR

The oldest breeding pair

- 14 hatched chicks from 2014 until now
- 2026 - 2 laid eggs/ 1 chick hatched



New breeding pair

- First breeding season- 2026
- 1 laid egg/ 1 chick hatched

Because of the inexperience of the pair, the chick was placed with the older pair



Protected emblematic species in Strandzha mountain

Sideritis syriaca L. grows on dry calcareous, stony terrains, heavily eroded, in places with an outcrop of bedrock.



Conservation status. Protected species with the category "Critically Endangered" - BDA. Red Data Book: Vulnerable [VU-A1,2 B2 C1 D1 E2 F G H3 I L2]



Protected emblematic species in Strandzha mountain

According to the EUNIS classification of habitats in Europe, the habitat has the code E1.55 Eastern sub-Mediterranean dry grasslands; Natura 2000: 62A0 Eastern sub-Mediterranean dry grassland (*Scorzoneratalia villosae*).



Protected emblematic species in Strandzha mountain



Sideritis syriaca is used for herbal teas, it is a symbol of local culture and hospitality.

Strandzha tea reduces the risk of cancer, stroke and heart disease. It has been used as an anti-inflammatory, antimicrobial (with particularly strong activity against *S. aureus*, *E. coli*, and *E. faecalis*), antioxidant, and analgesic agent in folk medicine.



Protected emblematic species in Strandzha mountain



In Bulgaria, local producers in Strandzha have begun cultivating the plant to ensure a sustainable supply, establishing nurseries in villages like Varovnik.

Cultivated Crimean tea in the Rhodope mountains - Momchilovci village.



Protected species from the Rhodope mountains



Haberlea rhodopensis Friv, also known as Rhodope silivryak, the “Orpheus’ plant”, is an endemic species from the Balkan Peninsula in the family Gesneriaceae. It is included in the European list of rare, and endemic plants and in the Bulgarian list of endangered plants. The species is protected by the Biological Diversity Act in Bulgaria.

Protected species from the Rhodope mountains

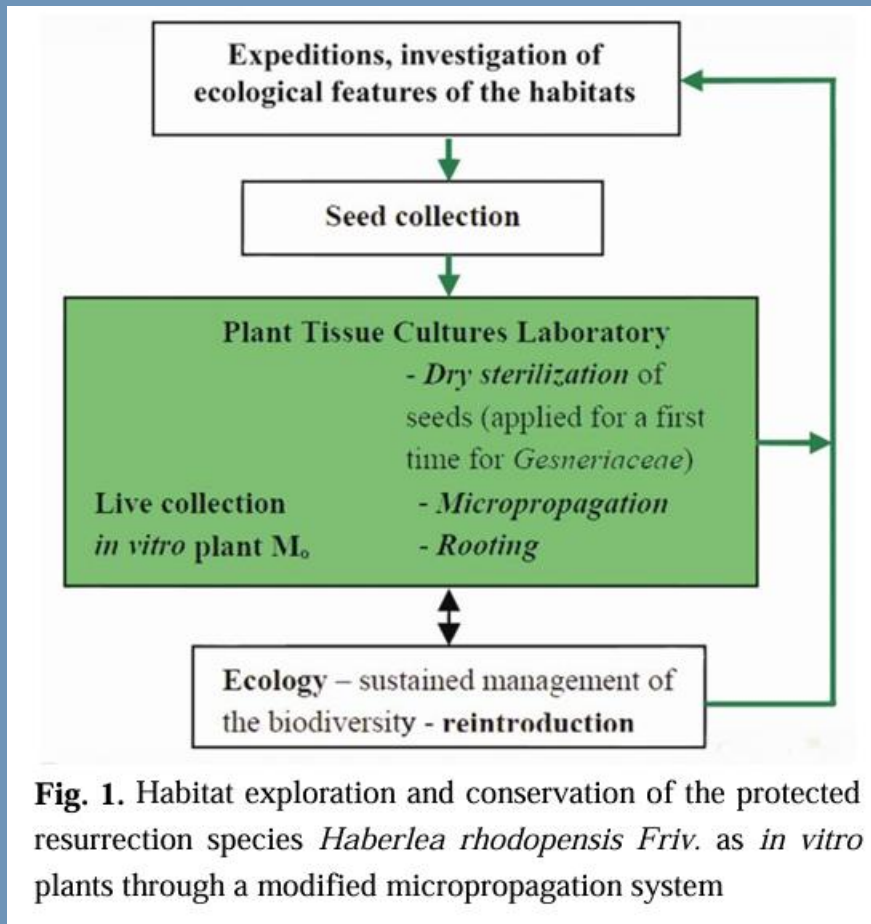


Haberlea rhodopensis (Rhodope haberlea).
From Chervenata stena Reserve, Bulgaria.

Habitat

The plant grows in the Rhodope mountain in southern Bulgaria and northern Greece, on silicate and calcareous rocks in a shady and humid oak and beech belt, usually 250 to 1400 m above sea level.

Resurrection plants are unique among angiosperms for their ability to survive during periods of severe drought. This plant has the unique ability to remain alive for up to 31 months after being completely dried.



An *in vitro* live collection containing plants from various habitats with the aim of conservation and investigation of the natural population is created for the first time in Bulgaria. The live collection of *in vitro* *Haberlea rhodopensis* plants will be a donor for the reintroduction of adapted *in vitro* plants in their natural, endangered habitats.



RESTORATION AND PROTECTION OF THE POPULATION OF RARE AND PROTECTED PLANT SPECIES IN VITOSHA NATURE PARK

5 species with conservation importance:



Potted plants of *Acer heldreichii*

The Buckbean (*Menyanthes trifoliata*), the Round-leaved Sundew (*Drosera rotundifolia*) The Mountain Maple (*Acer heldreichii*), The Alpine Clematis (*Clematis alpina*) are protected by the Bulgarian Biodiversity Act (Annex 3).

Menyanthes trifoliata and The Common Yew (*Taxus baccata*) are listed in the Red Data Book of Bulgaria as endangered (Evstatieva, 2015) and *Drosera rotundifolia* and *Clematis alpina* is included in the Red List of Bulgarian vascular plants, classified as „vulnerable“ (Petrova and Vladimirov, 2009).

“



Potted plants of
Clematis alpina

Collected propagating materials (seeds and cuttings) have been used in an in vivo experiment. The appropriate methods and techniques have been selected to ensure the greatest possible success in reproduction.

RESTORATION AND PROTECTION OF THE POPULATION OF RARE AND PROTECTED PLANT SPECIES IN VITOSHA NATURE PARK

The newly cultivated plants from the five rare species were planted at pre-selected locations on Vitosha. When choosing these sites, the ecological characteristics of the population from which the plants originate were taken into account, in order to ensure that the conditions are as similar and suitable as possible for successful establishment.

The successful reintroduction and restoration of extinct species in Vitosha Nature Park are the most valuable results.



Newly planted saplings of *Salix pentandra* in forest peatlands near the “Zvezditsa” hut

CONCLUSIONS

The conservation of biological diversity requires coherent, science-based interventions, sustainable habitat management, and continuous engagement from institutions, research teams, and local communities. The examples demonstrate that timely, well-designed, and evidence-driven conservation measures can effectively counteract negative ecological trends and ensure the long-term preservation of valuable plant and animal species.

Ensuring resilient and healthy ecosystems is essential for maintaining the ecological foundations of Europe's future.



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THANK YOU!

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