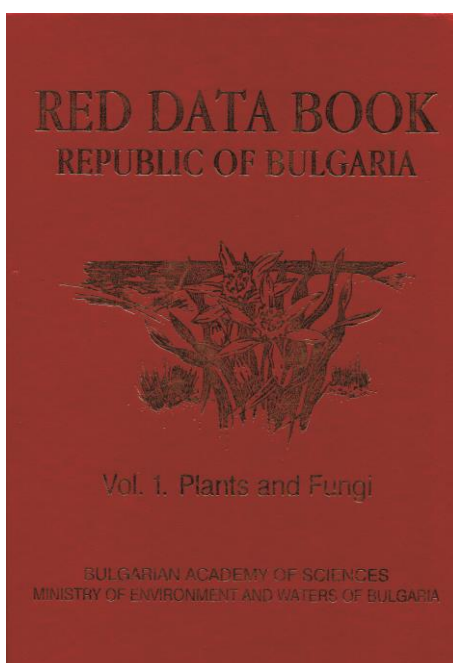


BOOK REVIEW

DIMITAR PEEV et al. (Eds.), *Red Data Book of the Republic of Bulgaria. Volume I. Plants and Fungi*, 2015, BAS & MoEW, Sofia, 881 p., 242 photos, 60 maps, and 104 references.

A very valuable book was published at Sofia, under the auspices of the Bulgarian Academy of Science and Ministry of Environment and Waters of Bulgaria, in 2015, namely *Red Data Book of the Republic of Bulgaria. Volume I. Plants and Fungi*, as an output of a national scientific team.

The book has been published in very good technical conditions, with some color, detailed photographs, and many color ink drawings, accompanied by references for every described plant species inside, on A4 size pages.



In the first part of the book, the authors present an introduction to the Red Data Book of the Republic of Bulgaria, with interesting historical data on the attempts of the Bulgarian specialists in preparation of the previous red books on flora and fauna of Bulgaria. In *Introduction* to volume 1 – *Plants and Fungi*, there are highlighted aspects on flora of Bulgaria, where, 20.5% of the vascular flora is threatened with extinction under various pressures, as trampling, grazing, infrastructure development and stone-pitting, alien plants etc.

Important thing is that, for the first time in Bulgarian literature on flora, this up-to-date book includes algae, bryophytes and fungi, besides the vascular plants. The authors make themselves a summary of this book. Thus, it includes “...all extinct, regionally

extinct, critically endangered and endangered species of plants and fungi...”. More, ca. 20% from the vulnerable species have been included in the current red book.

The book is divided in four large chapters, namely: Algae (pages 29-36), Bryophytes (pages 37-141), Vascular Plants (pages 143-720), and Fungi (pages 721-874). Each of the four large sections is ended with a pretty comprehensive list of references. All the species are displayed by their category of threats, within each taxonomic group, as: Extinct (EX), regionally extinct (RE), critically endangered (CR), endangered (EN), the last one being those vulnerable (VU). Altogether, this book includes descriptions for 808 species.

For each species, the author(s) compiled the next data: latin name, followed by the authors(s); synonyms (in some cases); family or division (for algae) (both in latin and as vernacular names); illustrations; conservation status in Bulgaria; essential data on morphology and biology of each species; habitats and populations; distribution on Bulgarian territory, given in floristic regions and subregions, followed by a geographical map of Bulgaria, divided in grids of 10 x 10 km UTM squares (each taxa is located by red/black points on the grids); general distribution (area of distribution); threats; conservation measures taken; conservation measures needed; very specific references used for each taxa; the author(s) of each micromonography.

The last section of the book is an alphabetical index of latin names of the taxa included in, with the corresponding page number(s).

The first chapter dedicated to Algae list 6 species, as CR (5) and EN (1). All 6 species (*Chara kokeilii*, *Nemalion helminthoides*, *Padina pavonica*, *Thorea hispida*, *Tolypella intricata*, *Bryopsis hypnoides*) are very rare in Bulgaria, being seriously threatened by water pollution, habitats destruction, collecting etc.

The second chapter dedicated to Bryophytes (Liverworts, Mosses) list 102 species, as: CR (27) and EN (42), VU (33). Most of the species (e.g. *Fossombronia husnotii*, *Jungermannia caespiticia*, *Porcella pinnata*, *Riccia crustata*, *Scapania apiculata* etc.) are very rare in Bulgaria, being seriously threatened by habitat disturbance, cutting down of forests, road constructions, rivers drying, trampling, and so on.

In the third chapter, dedicated to the vascular plants, is to be highlighted some of the rarest species, existing in Bulgaria, such as the next ones: *Ephedra fragilis* subsp. *campylopoda*, *Quercus thracica*, *Aethionema arabicum*, *Alchemilla bandericensis*, *A. mollis*, *Alopecurus thracicus*, *Alyssum orbelicum*, *Anchusa davidovii*, *Androsace obtusifolia*, *Anthemis argyrophylla*, *A. jordanovii*, *Arenaria rigida*, *Astragalus alopecurus*, *A. exscapus*, *Avena eriantha*, etc. (in a single grid), *Asplenium lepidum*, *Botrychium matricariifolium*, *Osmunda regalis*, *Pinus brutia*, *Aegilops comosa*, *A. dichasians*, *Alchemilla asteroantha*, *Aldrovanda vesiculosa*, *Arbutus andrachne*, *Artemisia involucrata*, *Asperula involucrata*, *A. suberosa*, *Centaurea jankae* (present also in Romania), and so on (in two grids), *Isoetes lacustris*, *Achillea kotschyi*, *Amygdalus × delipavlovii*, *Arbutus unedo*, *Artemisia chamaemelifolia* etc. (in three grids). In total, there are listed 8 ferns, 4 gymnosperms, and 539 angiosperms. Regarding the threat category, they are categorized as the next ones: EX (2), RE (12), CR (204), EN (295), VU (38).

In the fourth chapter, a list of fungi with macroscopically fruit bodies (macromycetes), both ascomycetes and basidiomycetes, is presented, with color drawings and distribution in Bulgaria. Every sheet is signed by renowned Bulgarian mycologists. There are presented 149 species of fungi, classified as CR (37 species), EN (104 species) and VU (8 species), making this list a large and comprehensive one. Some of the species

from this list are also listed in a recent Mapping Programme of European Council for the Conservation of Fungi, 51 species being studied concerning their distribution, ecology and status. In the present Red Book, one species critically endangered (*Tricholoma colossus*), 7 species endangered (*Amylocystis lapponicus*, *Battarrea phalloides*, *Boletus dupainii*, *Hericium erinaceus*, *Hydnellum suaveolens*, *Phylloporus pelletieri*, *Polyporus rhizophillus*, and *Suillus sibiricus*) and three vulnerable species (*Gomphus clavatus*, *Helvella atra*, *Sarcosphaera coronaria*) are also listed in the mentioned programme, as being threaten in different way.

Among the causes which threat all these species, the most common are: changes in land use, intensification of agriculture, trampling and grazing, drainage of the wetlands, habitat loss and destruction, water pollution, forest fires, afforestation, deforestations, climate aridisation, alien species, fires, tourism infrastructure, habitat fragmentation, low reproductive potential, and so forth.

As the authors already said, this new “Red Book” could contribute to the halting of the species/habitat loss in Bulgaria. Also, it could be a good guide for those future steps toward a better management in conservation actions and plans, in order to preserve the biodiversity in the region.

Not least, it is worth noting this fruitful collaboration among specialists in various plant groups and fungi.

We consider this book as an exceptional editorial issue and recommend it warmly to anyone interested in botany, not only in the study of nature conservation.

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