

**BOOK REVIEW**

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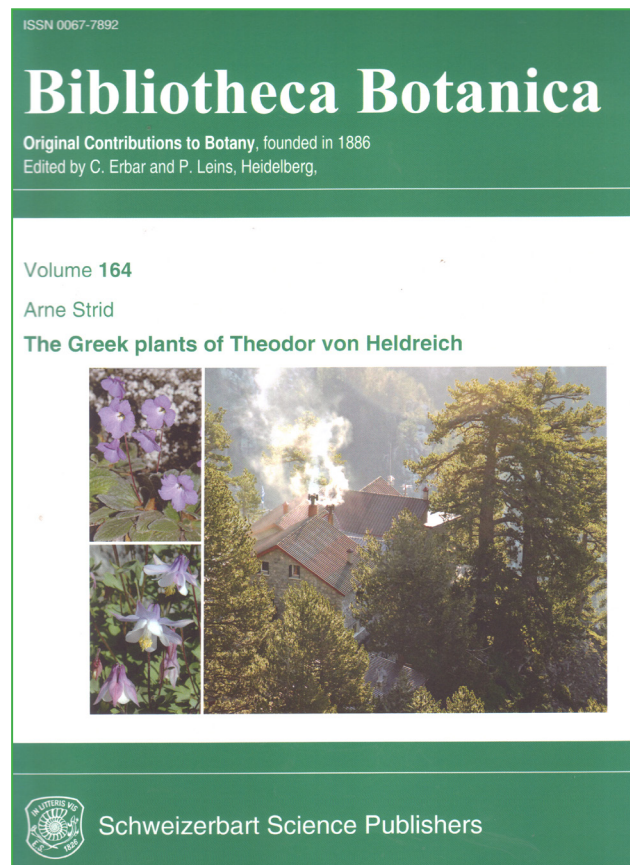
## The Greek plants of Theodor von Heldreich. –

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After publication of the three-volume *Atlas of the Flora Hellenica* (2024), the author Arne Strid offers another meticulous, comprehensive and immensely valuable study focusing on the work of the renowned 19<sup>th</sup>-century leading explorer of the Greek flora, Theodor von Heldreich. With dazzling expertise and deep insight, the author introduces the readers to a distinguished scholar of the Greek flora and taxonomist with indisputable contributions for that era. The monograph divides into: **1.** Materials and methods. **2.** Brief biography. **3.** Annotated list of taxa. **4.** Botanical publications by Theodor von Heldreich. **5.** Other literature cited. **6.** Photo Appendix. **7.** Index to scientific names.

### 1. Material and methods

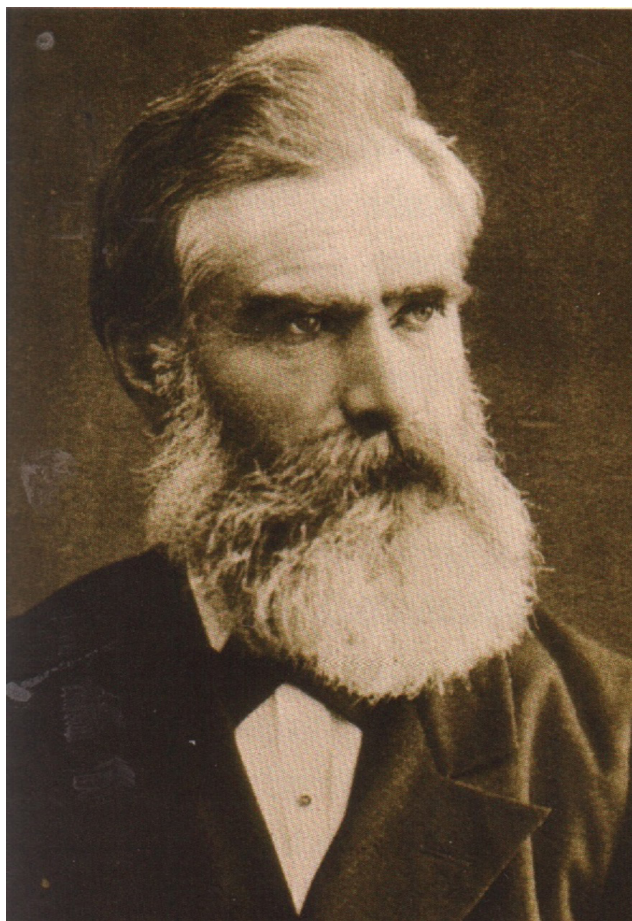
In that part, the author explains that the primary source of information has been the Flora Hellenica Database, compiled and maintained by him and his collaborators over more than 30 years. That database contains over one million floristic records and is further enriched by online databases of Heldreich's collections housed in various herbaria: in Geneva, Paris, etc. The author mentions the locations of preservation of Heldreich's plant collections. A significant part of



these collections, primarily due to Heldreich's long-term collaboration with Boissier, are stored at the *Conservatoire et Jardin botaniques de Genève*, both in the general Herbarium (G) and especially the Boissier Herbarium (G-Boiss). Other key repositories of Heldreich specimens include WU-Hal, B, BM, GOET, K, ATHU, and several herbaria in the United States and Australia. Heldreich's work is closely connected with the rich and diverse flora of Greece (about 5600 species).

### 2. Brief biography

The author notes that a thorough biography of Heldreich should be a matter of a different project requiring more extensive research in the Greek, German and Swiss archives. That is probably why he has entitled that chapter *Brief Biography*. Although it is not "brief" at all. Instead, it offers a detailed and fasci-



nating account of the significant and interesting moments in the life of Theodor Hermann von Heldreich (1822–1902). Born in Dresden, Heldreich displayed a strong interest in botany from a young age. He spent some time in Geneva, where he worked under the mentorship of Augustin de Candolle and his son Alphonse de Candolle, an experience which profoundly shaped his future career. During his time there, Heldreich also met Edmond Boissier, a prominent botanist of that era, who was so impressed by the young man that in 1841 he named a newly discovered genus *Heldreichia* in honour of Heldreich.

Inspired by those scientists, Heldreich travelled to Greece (1843), where he met other famous researchers of the Greek flora with significant botanical collections (Spruner, Sartori, etc.), after whom he named some newly described species either independently or in collaboration with Boissier (*Anthemis spruneri* Boiss. & Heldr., *Campanula sartorii* Boiss. & Heldr., *Hieracium sartorianum* Boiss. & Heldr., *Ranunculus*

*sartorianus* Boiss. & Heldr., *Silene sartorii* Boiss. & Heldr., *Veronica sartoriana* Boiss. & Heldr., etc.).

Heldreich published his first study on the Greek plants (*Arbutus unedo* and *A. andrachne*) in 1844, at the age of 22. He undertook an expedition to the Peloponnese, where he collected plants and sent them to Boissier in Geneva. Next year, he conducted a successful expedition to western and southern Anatolia (1845), from which he and Boissier described a considerable number of new species.

Thus, year by year, the author of the monograph traces Heldreich's active work in Kriti, Parnassos, the mountains of Sterea Ellas, the Ionian Islands, and other regions, where he collected and described new species. His first major expedition, in the second half of July 1851, was to Mt Olympus, the highest mountain in Greece and outside its borders at that time. Many localities where Heldreich botanized in the second half of the 19<sup>th</sup> century were around Athens. In the subsequent years, a major expedition followed, in collaboration with Haussknecht (1885), and with many others. Heldreich remained very active until the end. He was fluent in several languages (German, Greek, French, Italian, Latin, and some English), corresponded with many scholars (Hooker, Darwin, Halácsy) and published a number of articles, which the author of the monograph has listed chronologically.

In the monograph, the author presents a geographical map of Heldreich's collecting localities, indicating the years of the expeditions from 1844 to 1901. The map clearly shows that over these more than 50 years of collecting he managed to cover almost the entire territory of Greece within its borders at that time.

Heldreich took part in the International Botanical Congress in 1874 in Florence.

He worked as curator of the Philip Barker's Herbarium in Paris, at the Natural History Museum of the University of Athens, and served as Director of the Botanical Gardens of the University of Athens for about 50 years (from 1851 until his death).

### 3. Annotated list of taxa

The list includes all taxa (species, subspecies or varieties) described by Heldreich alone, or in collaboration with other botanists, based on his collec-





**PLATE LII.** 1: *Tulipa hageri*. - 2: *Tulipa orphanidea*. - 3: *Tunica phthiotica* (*Petrorhagia phthiotica*). - 4: *Vaillantia aristata* (*Valantia aprica*). - 5: *Valeriana olenaea*. - 6: *Valerianella soyeri* (*V. echinata*). - 7: *Verbascum aphentulium*. - 8: *Verbascum epixanthinum*. - 9: *Verbascum gloeotrichum*.



tions, which are kept in various European herbaria, but mainly in Geneva (G & G-Boiss) and Vienna (W, WU & WU-Hal). The arrangement is alphabetical by genus and species, as originally published. Only the more important synonyms are included.

The author notes that, according to the registration in the Flora Hellenica Database, about 280 currently recognized Greek species and subspecies have been described or co-authored by Heldreich, while another 36 species have been named after him, such as *Acer heldreichii* Boiss., *Alcea heldreichii* (Boiss.) Boiss., *Allium heldreichii* Boiss., *Centaurea heldreichii* Halácsy, *Cirsium heldreichii* Halácsy, *Crataegus heldreichii* Boiss., *Galium heldreichii* Halácsy, *Goniolimon heldreichii* Halácsy, *Pinus heldreichii* Mill., *Silene heldreichii* Boiss., *Trifolium heldreichianum* (Gibelli & Belli) Hausskn., *Viola heldreichiana* Boiss., etc. Altogether, some 1210 names are considered, not including their synonyms.

In this part, comments are given for each of Heldreich's taxa regarding their contemporary taxonomic status, distribution, ecology and other features. For most taxa, the location of the type specimens is indicated. Numerous taxa have been lectotypified based on original materials collected by Heldreich (*Achillea taygetea*, *Centaurea orphanidea*, *Crepis sibthorpiana*, *Gagea amblyopetala*, *Poa timoleonis*, *Stachys graeca*, *Verbascum guicciardii*, etc.). Considering that Prof. Arne Strid is among the best contemporary explorers and experts on the Greek flora and having at his disposal the huge Flora Hellenica Database, these notes on the contemporary status and nomenclature of the taxa are particularly valuable and reliable.

#### 4. Botanical publications by Theodor von Heldreich

Heldreich's list of publications includes 69 titles in the period 1842-1920. As the author specifies, it does not include some contributions to textbooks, encyclopedia, etc.

#### 5. Other literature cited

That list includes 357 publications by authors related to the Greek flora, many of whom have described new taxa from it.

#### 6. Photo Appendix

The Appendix contains 54 plates featuring 486 colour photographs of taxa, arranged alphabetically by genus and species as originally published. As the author notes, all photos have been taken in Greece, although not necessarily at the *locus classicus*. Most photos are by the author, but he also credits 12 other people who provided images. A sample plate (Plate LII) is presented here.

#### 7. Index to scientific names

That Index provides the Latin names of the families, genera, species, and synonyms included in the *Annotated list*.

The presented monograph is an extensive, in-depth, and comprehensive study of the work of the remarkable 19<sup>th</sup>-century explorer of the Greek flora, **Theodor von Heldreich**, authored by Arne Strid, another distinguished researcher and connoisseur in this field in the 20<sup>th</sup> and 21<sup>st</sup> centuries. The book will be useful to botanists, researchers of the Balkan and European floras, plant taxonomists, and all students interested in the flora and biogeography of that region.

It is our deep conviction that the author's tremendous effort in writing this monograph will be appreciated by both current and future generations of researchers. We extend our congratulations, gratitude, and wishes for never-ending success in his endeavours.