

BOOK REVIEW**Vladimir Vladimirov^{1, 2} & Ana Petrova¹**

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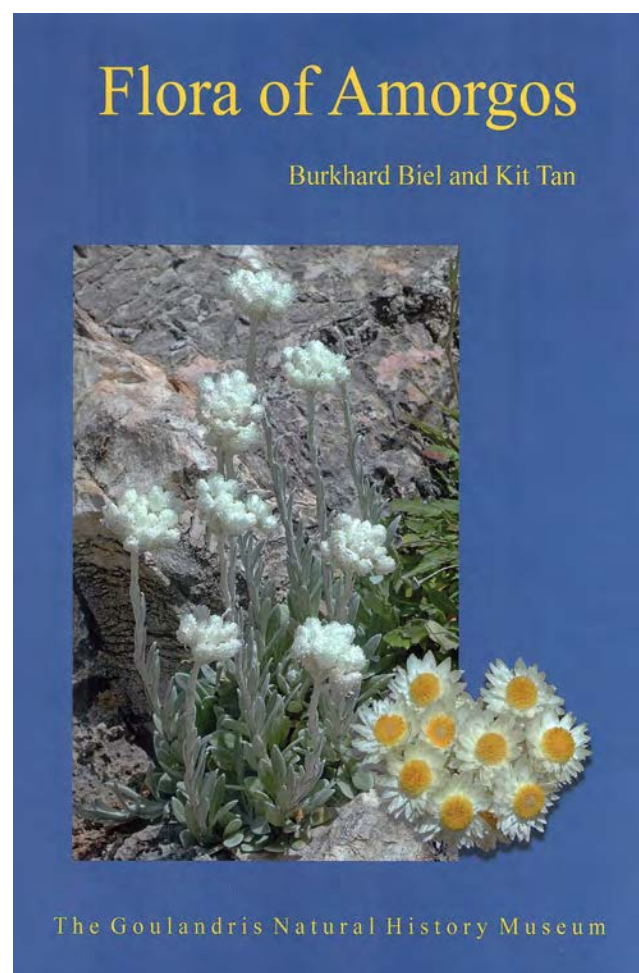
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Burkhard Biel & Kit Tan. 2019

Flora of Amorgos

The Goulandris Natural History Museum, Kifissia – Greece.
220 pp. Hardback. ISBN: 978-960-89808-6-0

Amorgos is a Greek island at the eastern margin of the Kiklades in the South Aegean Sea, situated some 220 km SE of Athens. It is 33 km long and 1.9 to 6.5 km wide, covering an area of 121 km² and stretching in W-SW – E-NE directions. Nearly the whole island is dominated by three mountain ridges. The highest peak is 821 m a.s.l. Especially characteristic are the rock cliffs exposed to various directions. The island is composed mainly of limestone (partly metamorphosed to marble and dolomite) and schist (partly flysch). The climate is Mediterranean, with moderate temperatures in winter (snowfall is rare) and rather high in summer. Precipitation is low, with its maximum in December and January, and with an average annual rainfall of *ca.* 350 mm. The island has been inhabited since Neolithic times (4500–3000 BC). Presently, it is thinly populated, with *ca.* 2000 inhabitants. Botanical exploration of the island started long ago, in 1700, when it was visited by J.P. de Tournefort. Since then, it has been visited by many outstanding plant-collectors and botanists: J. Sibthorp, Th. K.H. Rechinger, von Heldreich, Th. Orphanides, P.H. Davis, H. Runemark, A. Strid, and many others. Deserving mention is the fact that in 2014, the *Flora Hellenica* database held records of 798 species and subspecies of vascular plants. In this particular year, B. Biel, the first author of the book, started his extensive botanical exploration of the island. Kit Tan and G. Vold also visited and



studied the area. Due to the efforts of both authors of the book, in five years, the number of the recorded vascular plants increased by 27% and now reaches 1092 species and subspecies, listed and annotated in the book. In fact, many of the new records for the island and for the phytogeographical region of Kiklades have been published in *Phytologia Balcanica* in the period 2014–2019.

The book comprises *Introduction* and seven chapters.

Chapter I: *The island of Amorgos* describes concisely the history of the island, its cultural sites, physical parameters such as geographical position, geology, climate, and land use. Special attention is paid to two typical geomorphological structures: the coastal cliffs and the gorges, which shelter specific plant diversity. A brief overview of the fauna is presented as well.

Chapter II: *Botanical exploration* describes the major facts of botanical investigation of the island. A list of all amateur and professional botanists who have collected plants on Amorgos is provided, including more than 30 persons.

Chapter III: *The flora of Amorgos* presents some facts and analysis of the phytogeographical relationships and endemism of the island. Not surprisingly, its flora is most similar to that of the adjacent Naxos and Astipalea islands. Despite the small size of the area, it shelters at least 28 Greek endemic plants, of which 12 are obligate chasmophytes. An annotated list of the endemics is provided, with concise morphological descriptions, chromosome number, habitat, ecology, and distribution of the taxa, and a dot-distribution map. Two endemic taxa are restricted only to this island: *Erysimum senoneri* subsp. *amorginum* and *Symphytum davisii* subsp. *davisii*. Some notes on other floristic features are provided as well. It is interesting to emphasise the fact that the richest in taxa plant families are *Fabaceae* (116 species), *Asteraceae* (112 species) and *Poaceae* (103 species), out of more than 100 plant families represented in the flora. Aliens, ruderal and weedy species have been discussed too, with an observation that an increase of the number of these species can be detected during the past several decades based on a comparison with earlier publications. Special attention is paid to the involvement and efforts of the pupils of the High School of Amorgos in researching the traditional uses of herbs on the island.

Chapter IV: *The vegetation of Amorgos* is devoted to the description of vegetation and major habitat types (following the EUNIS coding and naming) on the island. A map of the vegetation units of Amorgos is provided. It has been drafted in the field, with the help of aerial photographs from Google Earth

and extensive field notes. Altogether, more than 10 habitat types have been identified and described concisely.

Chapter V: *Protection of vegetation and their sites* is devoted specially to conservation of the plant diversity on the island. Some comments on the human impact are provided as well as description of two NATURA 2000 sites. Special protective measures have been proposed, such as reducing the number of grazing sheep and goats and control of cattle farming to safeguard the traditional terrace walls and soil, control of tourism development on the few beaches, dealing with dumped waste near villages, etc.

Chapter VI: *Species lists* is the most extensive chapter of the book of over 100 pp. The total number of native and naturalised taxa of vascular plants in the list is 1092, belonging to 1040 species, 460 genera and 107 families. The general layout of the list follows *Flora Europaea* (Tutin & al. 1964–1980), but the families, genera and species are arranged in alphabetical order. For most taxa, a single herbarium specimen is cited, with its locality, habitat, altitude, geographical coordinates, and date of collection. In some cases, material has not been collected and this is indicated as personal observation of the respective person. If no material has been studied, then a reference to a literature source is provided. Also, a list of mosses (55 species) and liverworts (13 species) is presented. Although the book is named *Flora of Amorgos*, some parts of the mycota of the island are covered as well. Lists and localities of the lichens (216 species), lichenicolous fungi (7 species) and mushrooms (149 species) are given. Several other experts have contributed to compiling these lists of taxa, e.g. Elias Polemis (mushrooms) and Harrie Sipman (lichens).

Chapter VII: *References cited* gives a list of all cited works in the text, and includes 57 titles.

At the end of the book, acknowledgements and indices to all taxa (vascular plants, bryophytes, lichens and mushrooms) are provided.

The book is amply illustrated with high-quality original photos throughout the text. In addition, 17 colour plates, each containing nine photographs, are supplemented at the end.



Plate 16. – 1. *Muscari macrocarpum* 2. *Ornithogalum arabicum* 3. *Scilla autumnalis* 4. *Gladiolus italicus* 5. *Moraea sisyrinchium* 6. *Romulea bulbocodium* 7. *Gagea rigida* 8. *Anacamptis collina* 9. *Anacamptis sancta*

The book *Flora of Amorgos* is a de luxe edition of the Goulandris Natural History Museum, printed both in Greek and English. It is the first detailed work on the flora of this fascinating island. The high value of the book is due to the fact that it is the result of extensive field research on the island by the authors, especially by B. Biel, over the past five years. This makes it particularly reliable. Written in a clear and easy-to-read way and richly illustrated, the book will delight every reader. It will undoubtedly be of interest to all professional botanists and amateurs interested in the plant diversity of the Amorgos, the Kiklades, Greece, and the Eastern Mediterranean.

It is interesting that the 'Foreword' for the book has been prepared by the current Mayor of Amorgos. He admitted that this is the first complete documentation

of the flora of the island and committed himself and the responsible local politicians to do much more to protect their natural heritage and to follow the recommendations of the book. Let us hope that the authors with their dedication and enthusiasm have managed to ensure the needed local support to protect the valuable plant and fungal diversity of the island.

It is our pleasure to know personally one of the authors of the book, Dr. Kit Tan. She is an exceptional professional, enthusiastic, active and consistent researcher of the flora of Greece and the Aegean islands for many years. With good knowledge of most of her earlier books, we are delighted to welcome this new one. We congratulate both authors on their undoubted success with this edition and hope to enjoy in the future the results of their research.
