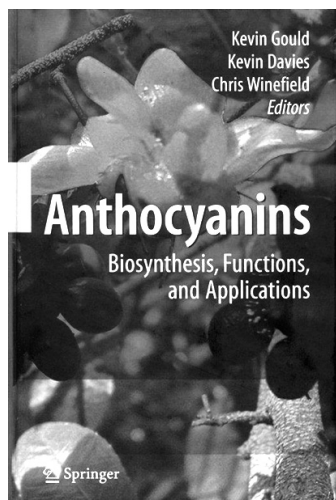


BOOK REVIEWS



ANTHOCYANINS. BIOSYNTHESIS, FUNCTIONS, AND APPLICATIONS. *Gould K., K. Davies, and C. Winefield (eds.)* Springer Science+Business Media, LLC, New York, NY, USA, 2009. pp. i-xviii + 329. ISBN 978-0-387-77334-6. USD 149.00. GBP 79.00. € 99.95.

Plant colours are attracting not only because they provide spectacular views of nature, but also for their functional roles. It is well known that nothing in nature is made by chance. Anthocyanins, molecules of plant secondary metabolism, are those natural pigments giving predominant contributions to the painted word. Their appearance on external portions of plant organs seems to be a kind of language to communicate with the animal kingdom, with the aim of attracting or repelling in order to facilitate plant reproduction and diffusion or plant defence, respectively. Learning about the beneficial effects of anthocyanins in plants, humans have discovered how beneficial anthocyanins can be to their health as well.

Considerable literature in plant sciences is devoted to understanding anthocyanin-involved mechanisms, however much remains as yet undisclosed. The book *Anthocyanins. Biosynthesis, Functions, and Applications* edited by Kevin Gould, Kevin Davies and Chris Winefield is certainly a useful reference for all researchers involved in the many multidisciplinary studies of these natural pigments and represents a valuable collection of research results and needed future work for this rapidly expanding field.

The different aspects of anthocyanin properties covered by this book include antioxidant activity and photoprotection, the role in plant defence mechanisms, the function in fruits and flowers. Extensive chapters are dedicated to plant cell cultures for the biosynthesis of anthocyanins and their biotransformation by microorganisms. In addition, the biochemical pathways of reactions occurring *in vivo* for the stabilization of anthocyanins and the characterization of new anthocyanin-derived compounds as food colorants are also considered. Finally, the last chapter deals with the phytochemical role of anthocyanins to promote human health.

Being an outsider to the plant science academic world, but working in spectroscopic monitoring of vegetation for about 20 years, I thoroughly enjoyed reading this volume and warmly recommend finding a place for this book on everyone's desk.

Giovanni Agati

LA CIVILTÀ DELLE ACQUE TRA MEDIOEVO E RINASCIMENTO. The culture of water between the Middle Ages and the Renaissance. *Calzona A. and D. Lamberin (eds.)*. Collana *Ingenium*, vol. 14. Edizioni Leo S. Olschki, Firenze, 2010. Volume I and II pp. xviii + 718, 11 figures, and 83 plates, 22 of which in colour. ISBN 978 88 222 5969 1. € 78.00.

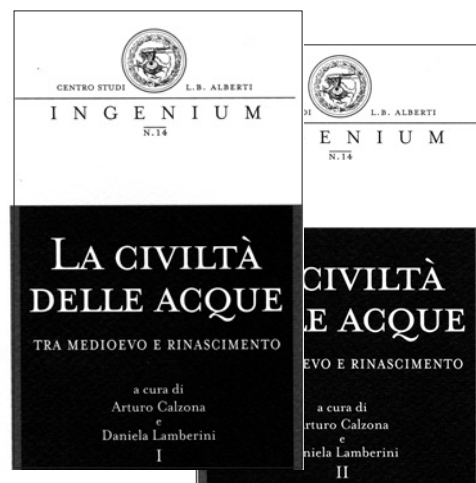
These two volumes contain the Proceedings of the international meeting of the same name held in Mantua 1-4 October 2008 and include presentations by 37 authors of national and international level. The works address the literary, philosophic, historic, political-economic and social, historical-artistic and architectural, and scientific and technical-engineering issues relative to the management and significance of freshwater in Italy from the Middle Ages to the Renaissance.

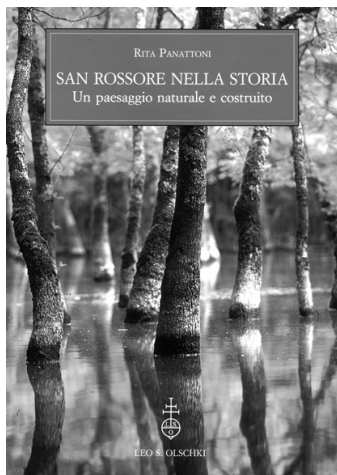
The works are grouped into five sections: literary and imaginary; political and economic management; art, architecture, landscape and territory; engineering, infrastructures, science and criticism; gardens, parties and spectacles. A final section deals with the magical, thermal, and nutritive aspects of the waters. The overall complex provides a true treatise on the subject matter, making these volumes valuable not only as a guide for those directly involved in the sector but they can also be a source for consultation for others who have personal interest in the topic.

Various illustrations and tables enrich each paper and there are numerous bibliographic citations, offering the reader the possibility to go into greater depth.

This subject is of considerable historical-cultural importance in Italy and both the meticulous work and the efforts by the various contributors – some of whom present their life work – attest to just how much there is to know about fresh waters in our country. These two volumes are therefore of great interest and usefulness and are an important contribution to the literature available on the topic and will surely be helpful for not only technical workers and students but also an increasing number of enthusiasts.

Francesco Ferrini





SAN ROSSORE NELLA STORIA: UN PAESAGGIO NATURALE E COSTRUITO. San Rossore in history: both a natural and built landscape. Panattoni R. *Collana giardini e paesaggio*, vol. 27. Edizioni Leo S. Olschki, Firenze, 2010. pp. xxxii + 230. 2 figures and 32 plates in colours. ISBN 978-88-222-6023-9. € 27.00.

This work by Rita Panattoni was awarded the *Premio Verbania, Editoria e Giardini* in 2009.

The title of the volume is, in itself, significant: the subject is not the history but rather the park of San Rossore. This difference may not seem important but the title of any publication should define the whole, which in this case is the role played by this park in the history of the region.

The book opens with an essay on the evolution of the botanical context by Fabio Garbari who underlines the extraordinary environmental value of this area which lies somewhere between being a garden and a landscape, and contains a total of 335 pages divided into five parts: the ancient San Rossore; San Rossore of the Medici family; San Rossore of the Lorena family; San Rossore of the House of Savoy; the post-World War II period, the 1950s. Overall the work effectively illustrates the story of the transformation of the original *Selva dei Tomboli Pisani* into the current San Rossore estate.

The earliest information about the San Rossore area – covering an area of 4800 hectares between the Serchio and Arno rivers, composed of woodlands and pine forests, beaches, dunes, fields and marshlands and approximately 12 km of coast – dates back to about 1000 AD. Up until the beginning of the 16th century this vast area was utilized for hunting and fishing or for the cultivation and harvesting of wood. It was the Medici family who began the work of transforming the estate, first as renters (in the 16th century) and later as owners. Subsequently ownership passed to the Lorena family, who used the estate frequently and added improvements. In the mid-1800s, when Tuscany became a part of the new Kingdom of Italy, the House of Savoy came to San Rossore and they occupied the estate for long periods of the year. After the War and the fall of the monarchy, San Rossore became the property of the President of the Republic.

The volume, which contains an ample list of bibliographic references and numerous illustrations in black and white and in color, is an important addition to the vast literature on the evolution of historical landscapes not only from a scientific and technical profile but also from an historical and cultural point of view. This approach thus offers the reader meaning and knowledge about the important and multiple values of the Park of San Rossore which has a role in creating an image of Tuscany.

Francesco Ferrini

PAESAGGIO RURALE: STRUMENTI PER LA PIANIFICAZIONE. STRATEGICA. *The rural landscape: tools for strategic planning.* Agnoletti M. Edagricole, Bologna, 2010. Figures 220. pp. xvi + 348. ISBN 978-88-506-5226-6. € 39.00.

Almost always legislation regarding a particular topic is distributed among various laws and decrees, which generally are based on or are handed down from previous periods and are more or less modified as needed. As a consequence, consultation of the regulations pertaining to a subject of interest can be often difficult and laborious and sometimes one has the feeling of not having investigated fully or having interpreted incorrectly, especially when the regulations are apparently contradictory (a not uncommon occurrence). Fortunately, Prof. Agnoletti has prepared this volume which represents a clear and precise compendium of the *Piano Nazionale di Sviluppo Rurale 2007-2013 (PSN)*.

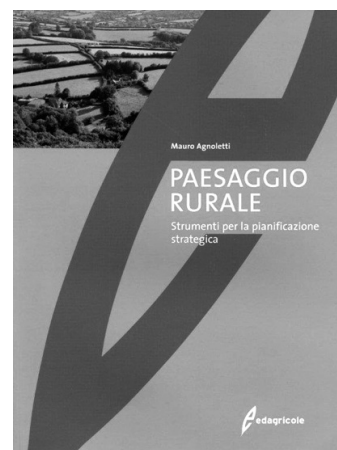
The text is divided into six sections: 1) The evolution of the rural landscape from Unification until today; 2) The evolution of forest landscapes from Unification until today; 3) Spatial characteristics and structural dynamics: the system of Tuscan monitoring; 4) The current structure of the Italian landscape; 5) The rural landscape in territorial politics; and 6) Strategies and actions in order to add value. The appendix contains a section dedicated to analysis methods and management processes.

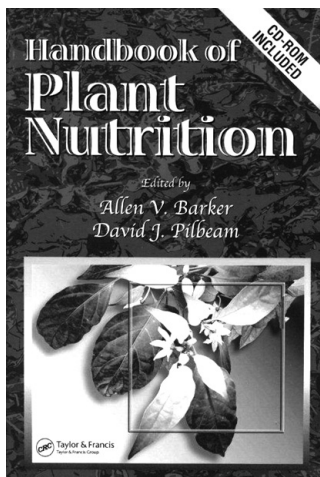
The *Piano Nazionale di Sviluppo Rurale 2007-2013 (PSN)* has included landscape amongst its strategic objectives, underlining its role in the new agricultural policy and the transformations which have occurred in terms of understanding the importance of this resource as well as that of the grower and the rural territory. This initiative is in line with the activities set out by the European Landscape Convention and with landscape planning promoted by the new *Codice dei Beni Culturali* involving workers in the sector, public decision-makers and universities. The meaning of landscape and the perception of it has, in fact, changed over time. It is the essential element in defining a development model that is particularly suitable to the rural context, representing not only the cultural identity of our country but also economic and environmental values. However it is necessary to elaborate a cultural and scientific proposal that is appropriate for the rural setting, which takes into account the fact that landscape is the result of a combination of social, economic and environmental factors in space and time where Man plays a central, not marginal role. The current volume proposes and adds to the materials utilized to develop a picture and definition of the strategies for landscape by the Ministry of agricultural, alimentary and forestry policy, illustrating approaches to analysis and providing additional material for integrated planning.

The text includes illustrations, tables, graphs and an ample list of bibliographic references which offer the reader a key to acquiring greater depth of knowledge in the particular aspects of the subject matter.

This work is of considerable scientific importance and the book can be of great interest for researchers and students in the field of environmental studies, as well as anyone who deals with landscape on a number of different levels.

Francesco Ferrini





HANDBOOK OF PLANT NUTRITION. *Barker A.V. and D.J. Pilbeam (eds.)* Taylor and Francis Group. CRC Press, New York, NY, USA, 2007. pp. XVI + 614 + CD-ROM. ISBN 0-8247-5904-4. US\$ 157.95.

The increasing demand on the world food supply, coupled with concern over the use of chemical fertilizers, has determined an interest towards the practice of precision agriculture, has led to a better control and monitoring of plant nutrition to maximize the rate of growth, the yield of crops as well as their nutritional value.

This handbook covers principles of plant nutrition from a historical standpoint to current knowledge of the requirements of crops for certain elements and the beneficial effects of others.

The book consists of twenty chapters, each one dedicated to an essential macro or micronutrient or beneficial element. More in details, each chapter, written by eminent researchers from across the world, gives historical information on the specific nutrient, explaining why it is either essential or beneficial for the plants; moreover an explanation of how appearance and composition of plants can be used to assess nutritional status is given, as well as recommendations on fertilizers that can be applied to remedy nutritional deficiencies.

This handbook, including a CD-ROM containing more than 40 illustrations in full colour, can be considered of great value, and for this reason recommended, to growers, agricultural consultants, agronomist and plant scientist, providing a practical easy-to-use reference for determining, monitoring, improving the nutritional needs of plants. The graphical presentations of plant interactions with nutrients and beneficial elements, and the straight-forward explanations of how nutrient deficiencies arise are especially useful to those seeking knowledge of plant nutrition.

Francesco Paolo Nicese

ORTICOLTURA MEDITERRANEA SOSTENIBILE. *Tesi R.* Patron Editore, Bologna, 2010. pp. 504. ISBN 978-88-555-3062-0. € 42.00.

The original work of Romano Tesi is inspired and basically derives from the interesting connection among some important facts. First of all, the Mediterranean Basin is the area of origin and varietal differentiation of many important vegetables, but it also allowed the selection of many others imported from Asia and America during the Colonization Era. To this is added the fact that the countries bordering the Mediterranean Basin are the most important producers and consumers of those products. In the context of this mixture of cultures and traditions the well-known “Mediterranean diet” has developed, which is considered worldwide as a bright example of the highest dietary level.

“Orticultura Mediterranea” is a new and updated book which gives particular attention to the changing market needs. Thus, in addition to general and specific aspects of the traditional horticulture, the book focuses into the composition and nutritional properties of vegetables, together with a outlook on the principal aspects of integrated production and organic farming.

The book is divided into two parts. The first part covers the horticulture in the Mediterranean Basin, which is deeply described in the following eight chapters: 1) *L'orticultura mediterranea* (Mediterranean horticulture); 2) *Classificazione degli ortaggi* (Classification of vegetables); 3) *Tipi di orticoltura e sostenibilità* (Sustainability of the different kind of horticulture); 4) *I sistemi colturali* (Cultivation systems); 5) *Qualità dei prodotti orticoli* (Quality of horticultural products); 6) *Mezzi di protezione* (Protection devices); 7) *Sementi e vivaismo orticolo* (Seeds and horticultural nursery); 8) *Gestione dell'azoto e dell'acqua di irrigazione nel pieno campo* (Nitrogen and irrigation water management in the field horticulture). The second parts is dedicated to the monographic description of more than one hundred horticultural crops, with broad and updated insights.

Due to its modern setting, the rich collection of tables, the presence of numerous coloured or black and white images in which the scientific knowledge of the author can be easily recognized, the book may serve to a wide group of readers, from the student to the teacher, from the expert to the manager.

Enrico Rinaldelli

