

## Book review

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## Book review

**Akhani H.: Plants and vegetation of north-west Persian Gulf: The coasts and islands of Khore Musa, Mahshar and adjacent areas.** – Maps and page design: Samadi N. – Tehran: University of Tehran Press, 2015. – ISBN 978-9-64-03-6739-1. – 507 p., many dot maps, more than 1600 colour photos, bilingual Persian/English; 24 cm, hardcover. – Price: EUR 60.

This Flora is not only written for students, scientists, amateur botanists and environmental managers living and working in Khuzestan (SW Iran), but is also addressed to an international readership, with its bilingual concept in Farsi and English.

The book introduces us to the flora and vegetation of the North-Western parts of the Persian Gulf. Beyond this area, it is a useful identification guide for the coastal flora of the countries surrounding the Persian Gulf. It starts with a brief outline of the abiotic conditions of the province of Khuzestan, which is a coastal area subjected to a tropical desert climate and a huge estuary with predominantly saline soils. Phytogeographically the flora is a mixture of Irano-Turanian, Saharo-Sindian and Mediterranean elements. The latter occur there due to a clear winter precipitation maximum. The vegetation types are described by their life-form spectra, species composition, and ecology. Very well-chosen photographs of representative habitats illustrate the vegetation structure. Phytosociological relevés and transect data provide original data of plot-related species composition. The most widespread ecosystems are aquatic and amphibious habitats, coastal dunes, salt-marshes and freshwater wetlands, xerophytic communities on gravelly alluvial soils and gypsaceous-calcareous hills. Ruderalization and disturbance is quite common in the study area, because it is a centre of the Iranian oil industry subjected to strong human impact and numerous environmental threats.

The main part of the book provides a catalogue of 363 vascular plant species, most of them (282) native, some spontaneous non-natives and a selection of cultivated plants. The families, genera and species are arranged in alphabetical order, grouped into gymnosperms, monocots and dicots. For each species, the scientific and vernacular names, a botanical description, the habitat and distribution in Iran and the distribution worldwide are listed. Distribution maps for all species native to Iran are given as dot maps, based on records in *Flora iranica* (Rechinger & al. 1963+), *Flora of Iran* (Assadi & al. 1992+), herbarium data and the author's own collections. Each

taxon is illustrated with a high-quality colour photograph showing its habit. For many species, additional images show the vegetation type or close-ups of flowers or fruits. Two species of *Chenopodiaceae*, *Salsola austroiranica* Akhani and *Suaeda khalijefarsica* Akhani, are described as new. Fifteen families are presented in brief features, and some terms (ethnobotany, biodiversity conservation, APG-classification, etc.) are explained for a broader public. The book ends up with a bibliography, an annotated checklist (scientific and vernacular names, status, rarity, habitat, potential use) and an index of scientific and Farsi names.

A main aim of the book is to encourage people to protect nature and the environment. Following the slogan “you can only protect what you know and admire”, this volume allows non-specialists to identify the plants and flowers they discover in their home area by comparing them with the excellent photographs. Thus students, conservationists and amateur botanists who do not have access to the standard Floras of Iran (Rechinger & al. 1963+, with 181 volumes published; Assadi & al. 1992+, with more than 60 volumes published), and who are not familiar with scientific identification keys, can verify the local flora. But also botanists travelling in Khuzestan Province and further along the Iranian coast, or those studying the flora and vegetation of the opposite Arabian coast, will profit from this book and its excellent photographs of freshly collected specimens. Such images are very useful to determine succulents (e.g. the numerous *Chenopodiaceae* growing in the region), even if the book does not provide keys for identification. And we also get illustrations of SW Iranian endemics, such as *Allium olivieri* Boiss., *Echinops dichrous* Boiss. & Hausskn., *Grantia arachnoidea* Boiss., *Platychaete velutina* Boiss. & Hausskn., *Salicornia sinus-persica* Akhani, *Verbas-cum kochiiforme* Boiss. & Hausskn. and the above-mentioned newly described *Salsola austroiranica* and *Suaeda khalijefarsica*.

The author, Hossein Akhani, can be congratulated on this illustrated Flora. He is a well-known scientist and botanist in the old, broad sense: starting as a plant systematist with his Ph.D. on the plant diversity of the Golestan National Park in NE Iran (Akhani 1998) and with his main interests on halophytes and  $C_4$  plants (discovering a single-cell-mechanism of  $C_4$  photosynthesis), he has made important contributions in the field of vegetation science and geobotany, in taxonomy and molecular systematics (*Chenopodiaceae*, *Caryophyllaceae*

and *Plumbaginaceae*). And he has been engaged in the protection of nature in Iran by his work on the Golestan National Park (Akhani 2005) and, with this volume, also the Persian Gulf coast. This book can be highly recommended to everybody interested in this area, experienced botanist or amateur naturalist alike.

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