

BOOK REVIEW

Review of *Plants at the margin. Ecological limits and climate change*, by R.M.M. Crawford (2008). Cambridge: Cambridge University Press. 478 pp. ISBN 978-0-521-62309-4.

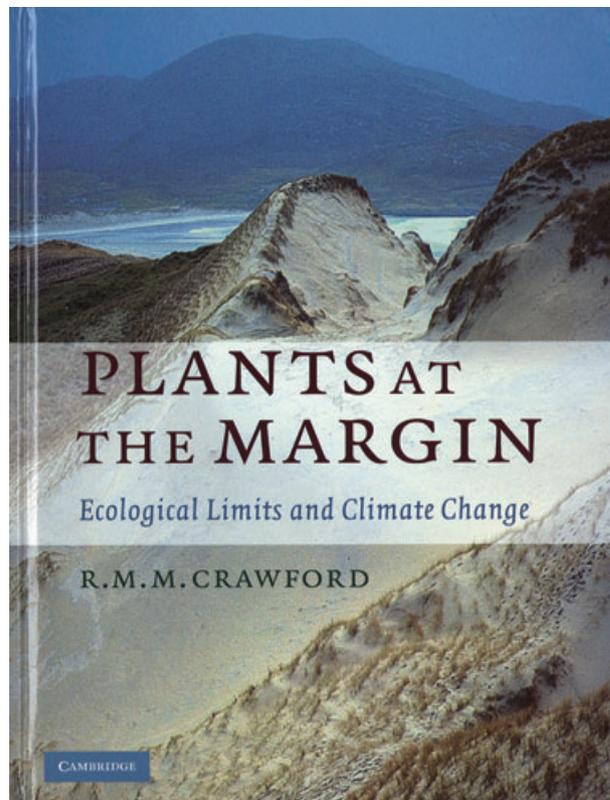
Professor Crawford does it again! It was a great privilege to be asked to review Professor Crawford's latest book, *Plants at the margin*, and I did so with immense pleasure. It is a hefty tome, a full 478 pages, but is easy to read and richly illustrated with figures, tables and maps, as well as many photographs from Crawford's own expeditions. Crawford draws on his own extensive field experience, and his love of the Arctic clearly shines through, with examples from Svalbard, Greenland, Iceland, Ellesmere Island, Siberia and northern Scandinavia.

Many other books about plant ecology focus on plant life in well-established, stable-state vegetation types. Crawford's book gives a new and refreshing slant to plant ecology by examining situations where plants are at the margins of their existence. Marginal areas are, by their nature, dynamic ecosystems, and this book explores the various difficulties and challenges for plants to survive in changing and harsh conditions. Crawford pulls together his own studies and those undertaken by an impressive list of refereed authors (there are 27 pages of up-to-date references to scientific publications). These are based on ecological observations and studies of experimental plant ecology and ecophysiology, in both the field and laboratory, together with studies from the fields of biogeography, demography, reproductive biology and genetics. Plants at the limits of their distribution are very likely to be affected by climate change. This is a timely work, now that the general public has started asking the big question, "So what is the effect of climate change likely to be?" This book points the reader towards finding out some of the answers.

The common features of marginal areas and the challenges they produce for plants are discussed first in the book, before going into detail about different types of marginal habitats. Part I focuses on the nature of marginal areas and their effects on biodiversity. Part II examines plant function in marginal areas: how they overcome resource limitations and short growing seasons in order to effectively reproduce. Part III discusses selected case histories of different marginal habitats. Case histories include examples from the Arctic, at high altitudes, in coastal margins and at the water's edge, and include problems of flooding and aeration, and the special case of woody

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plants. In addition, human influence has also been discussed, including settlement, agricultural and coastal issues, soil impoverishment and impact on wetlands. The book concludes with chapters on signs of change, vegetation responses, adaptations to climate change, fragility versus stability and diversity of ecosystems, conservation and regeneration, and future prospects.

Plants at the margin is a book that is suitable for students and researchers, and for others interested in both marginal habitats and the impact of climate change. I would highly recommend it as an undergraduate text book. There is also an electronic version, with all the figures and illustrations from the book made available for lecturers' presentations, which will help to inspire and motivate students. Professor Crawford writes: "Numerous illustrations have been included as a reminder of the place of plants in their habitats and that whatever may be learnt from the application of sophisticated methods of investigation it is the existence of the plant in its environment that has prompted our initial curiosity" (p. xiv).

Well done Professor Crawford—another good book for us to learn from and enjoy!