source factor of root–shoot signalling, involving changes in the xylem sap milieu during drought stress, adds interesting insight into the plant–water relationship. Tracing of biotic and abiotic stress signalling pathways and their crosstalk as well as integration provides a new understanding in plant stress biology.

Part II of the book begins with abiotic stress response involving gene expression and genome-based understanding of stress response. The next overview is on promoters and transcription factors in abiotic stress responsive gene expression, followed by a review on epigenetic regulation of genes, small RNAs and chromatin modelling (a robust essay on an emerging field of research). In the chapter on programmed cell death, the readers will find a new outlook on hormonal interactions regulating biotic necrosis cell death involving abiotic stress.

The chapters in part III have an intensive focus on plant homeostasis like the one involving Na+/K+ ions, glutathione homeostasis during salt or heavy-metal stress; water economy and stomatal movements, and deprivation effects of macronutrient like N, P, and S in green alga Chlamydomonas. There is also a chapter on osmolyte regulation, including osmolytes, glycine betaine, glyoxylate, glucosylglycerol and diphosphoinositol.
The last chapter is on programmed cell death in plants, signalling regulators of plant cell deaths and the role of cell organelles in cell suicide.

The last part of the book deals with overcoming stress and modes of adaptation to abiotic stress through breeding efforts, transgenic approaches and marker-assisted breeding, mutations and mutators for stress resistance. There is a discussion on varietal improvement in rice to tolerate salinity stress as well as a lucid story of the elephant and the blind men – analogy in systems biology. The last chapter tells the readers about the threatening consequences of climate change-based abiotic stress and how to combat it for improving plant productivity.

In conclusion, the book is informative and innovative. Researchers, teachers, graduate students and advanced undergraduate students would benefit from it. We recommended it to all those interested in plants and microbes, and their biology. The editors point out that this book is designed for advanced courses in stress biology, molecular biology, biotechnology, agricultural and environmental biology. We agree that this is an exciting addition in the field.


Further, the complete Table of Contents of the book is available at: http://www.springerlink.com/content/978-90-481-3111-2/section=630469&page=1&locus=0. In addition, the Preface, colour figures and biographies of the editors, can be downloaded free at this website which also hosts the most appropriate cover of this book.

Regrettably the book is unaffordable for students to own a copy. However, e-copies of the book are available at several libraries.

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Errata

Stratosphere-troposphere exchange of ozone at Indian Antarctic station, Maitri

Nandita Ganguly

1. The last sentence of the abstract as it appears in print was not present in the author’s final version of the article. So the abstract should be read as ending with ‘…eventual transport to the lower troposphere.’

2. Page 1078, column 1, para 2, the second sentence should read: ‘Stratospheric intrusions observed in this study were associated with pronounced cut-off circulations’.

Novel mechanisms of emergence of multidrug resistance tolerance

R. Jayaraman
[Curr. Sci., 2010, 99, 1008–1010]

Page 1008, col 3, lines 35–40 should read: ‘Their earlier observation’ that recA0 mutants were more sensitive to bacterial antibiotics implies the involvement of the SOS response in ROS-mediated lethality’.