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Autore	Koller Dov
Titolo	The restless plant [[electronic resource] /] / Dov Koller ; edited by Elizabeth Van Volkenburgh
Pubbl/distr/stampa	Cambridge, Mass., : Harvard University Press, 2011
ISBN	0-674-05943-3
Descrizione fisica	1 online resource (225 p.)
Altri autori (Persone)	Van VolkenburghElizabeth
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Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Frontmatter -- Contents -- Foreword -- Author's Preface -- Editor's Preface -- 1. A Guided Tour of Plant Movements -- 2. Motors -- 3. Gravity- Guided Movements -- 4. The Underground World -- 5. Light-Driven Movements -- 6. Tracking the Sun -- 7. Prey- Driven Movements -- 8. Liberation Movements: Leaving the Nest -- Conclusion -- Glossary -- Further Reading -- Index
Sommario/riassunto	Dov Koller (1925-2007) was working on this book when he passed away, and his daughter Daphne (a MacArthur fellow, mathematician and computer scientist at Stanford with her own book published in 2009 by MIT Press) sent the manuscript to MGF. This is the summary of a career and a field (plant biology), written in accessible language so that it can extend its reach beyond a small circle of specialists. The book is probably the most up-to-date account of movement in plants. It draws on examples across the spectrum of plant families, including mosses, ferns, conifers and flowering plants. The book begins with an explanation of how cellular motors work and then describes how cells manage to move organs. The bulk of the book explains how plants and plant organs (roots, stems, leaves, flowers) move in different environments and situations. Movement of roots, tubers, rhizomes and other plant parts underground is described in detail and much of this information is suprising because we normally don't see it happening. Movement of stems and leaves toward the light is the research specialty of the author, and is explained in detail in two chapters. Effort is made

to present information at the subcellular and cellular levels, including the roles of receptors, signaling pathways, hormones, and physiological responses leading to motor function. The adaptive significance of movements is discussed in each case.
