Record Nr. UNINA9910741150603321 Parasitic orobanchaceae: parasitic mechanisms and control strategies / **Titolo** / Daniel M. Joel, Jonathan Gressel, Lytton J. Musselman, editors Pubbl/distr/stampa New York, : Springer, 2013 **ISBN** 3-642-38146-4 Edizione [1st ed. 2013.] 1 online resource (xvii, 513 pages): illustrations (some color) Descrizione fisica Collana Gale eBooks Altri autori (Persone) JoelDaniel M GresselJonathan MusselmanLytton John <1943-> Disciplina 570 571.2 572572 577.8/57 Soggetti Orobanchaceae Plant parasites Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto pt. I. The orobanchaceae and their parasitic mechanisms -- pt. II. The weedy orobanchaceae and their control. This book was written in response to significant recent advances in Sommario/riassunto understanding the mechanisms of parasitism in the Orobanchaceae. and breakthroughs in the control of the parasitic weeds Striga and Orobanche. It consists of 26 contributions by internationally recognized leading scientists. The main book chapters are grouped into two parts: Part I – The Orobanchaceae and Their Parasitic Mechanisms Part II – The Weedy Orobanchaceae and Their Control The first part provides cutting-edge information on all key aspects of plant parasitism, such as the structure, development and function of the haustorium; nutrient transfer and the physiology of the parasite-host association; host reaction to parasitic plants; seed production and germination; the strigolactones and host-parasite signaling mechanisms; the parasite genome, phylogenetics, evolution and epigenetics; and ecology. Topics of the second part include: the problem posed by the weedy parasites; population diversity and

dynamics; molecular diagnosis of seed banks; and detailed discussion of the various management strategies, including agronomic, chemical and biotechnological approaches, as well as host breeding for resistance, allelopathy and biological control. This book is intended for plant scientists, university lecturers and students, agronomists and weed specialists, breeders and farmers, extension personnel and experts in tropical and subtropical agriculture.