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Nota di contenuto	Frontmatter -- Contents -- Acknowledgments -- 1. Plant Behavior and Communication -- 2. Plant Sensory Capabilities -- 3. Plant Learning and Memory -- 4. Cues and Signals in Plant Communication -- 5. Plant Responses to Cues about Resources -- 6. Plant Responses to Herbivory -- 7. Plant Communication and Reproduction -- 8. Microbes and Plant Communication -- 9. Plant Sensing and Communication as Adaptations -- 10. Plant Sensing and Communication in Agriculture and Medicine -- References -- Index
Sommario/riassunto	The news that a flowering weed-mouseear cress ( <i>Arabidopsis thaliana</i> )-can sense the particular chewing noise of its most common caterpillar predator and adjust its chemical defenses in response led to headlines announcing the discovery of the first "hearing" plant. As plants lack central nervous systems (and, indeed, ears), the mechanisms behind this "hearing" are unquestionably very different from those of our own acoustic sense, but the misleading headlines point to an overlooked truth: plants do in fact perceive environmental cues and respond rapidly to them by changing their chemical, morphological, and behavioral traits. In <i>Plant Sensing and Communication</i> , Richard Karban provides the first comprehensive overview of what is known about how

plants perceive their environments, communicate those perceptions, and learn. Facing many of the same challenges as animals, plants have developed many similar capabilities: they sense light, chemicals, mechanical stimulation, temperature, electricity, and sound. Moreover, prior experiences have lasting impacts on sensitivity and response to cues; plants, in essence, have memory. Nor are their senses limited to the processes of an individual plant: plants eavesdrop on the cues and behaviors of neighbors and-for example, through flowers and fruits-exchange information with other types of organisms. Far from inanimate organisms limited by their stationary existence, plants, this book makes unquestionably clear, are in constant and lively discourse.

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