1. Record Nr. UNINA9910373910403321

Titolo	Biotremology: Studying Vibrational Behavior / / edited by Peggy S. M. Hill, Reinhard Lakes-Harlan, Valerio Mazzoni, Peter M. Narins, Meta Virant-Doberlet, Andreas Wessel
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-22293-4
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (516 pages)
Collana	Animal Signals and Communication, , 2197-7305 ; ; 6
Disciplina	150.72 591.594
Soggetti	Behavioral sciences Animal physiology Animal anatomy Evolutionary biology Biophysics Biological physics Animal ecology Behavioral Sciences Animal Physiology Animal Anatomy / Morphology / Histology Evolutionary Biology Biological and Medical Physics, Biophysics Animal Ecology Anàlisi de conducta Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I. Studying Vibrational Behavior: Ideas, Concepts and History -- Quo Vadis, Biotremology? -- What is Biotremology? -- Biotremology and Sensory Ecology -- Body Tremulations and their Transmission as Vibrations for Short Distance Information Transfer between Ephippiger Male and Female -- Part II. The State of the Field: Concepts and

Frontiers in Vibrational Behavior -- Physical Basis of Vibrational Behaviour: Channel Properties, Noise and Excitation Signal -- Copulatory Courtship with Vibrational Signals -- Stinkbugs: Multisensory Communication with Chemical and Vibratory Signals Transmitted Through Different Media -- Part III. Practical Issues in Studying Vibrational Behavior -- Practical Issues in Studying Natural Vibroscape and Biotic Noise -- Automated Vibrational Signal Recognition and Playback -- Part IV. Vibration Detection and Orientation -- Mechanisms of Vibration Detection in Mammals -- Determining Vibroreceptor Sensitivity in Insects: The Influence of Experimental Parameters and Recording Technique -- Directionality in Insect Vibration Sensing: Behavioral Studies of Vibrational Orientation -- Part V. Biology and Evolution of Vibrational Behavior in Some Well-Studied Taxa -- Vibrational Behavior in Elephants -- Seismic Communication in the Amphibia with Special Emphases on the Anura -- Vibrational Communication in Heelwalkers (Mantophasmatodea) -- Vibrational Behavior in Termites (Isoptera) -- Part VI. Applied Biotremology -- Mating Disruption by Vibrational Signals: State of the Field and Perspectives -- Mating Disruption by Vibrational Signals: Applications for Management of the Glassy-winged Sharpshooter -- Can Vibrational Playback Improve Control of an Invasive Stink Bug? -- Vibrational Trapping and Interference with Mating of Diaphorina citri -- Vibrational Behavior in Bark Beetles: Applied Aspects -- Part VII. Outreach and Resources -- Shaking it up in the Classroom: Coupling Biotremology and Active Learning Pedagogy to Promote Authentic Discovery -- Call for the Establishment of a VibroLibrary at the Animal Sound Archive Berlin -- The Arachnid Orchestras: Artistic Research in Vibrational Interspecies Communication -- Bioacoustic Music Inspired by Biotremological Research.

Sommario/riassunto

This volume is a self-contained companion piece to Studying Vibrational Communication, published in 2014 within the same series. The field has expanded considerably since then, and has even acquired a name of its own: biotremology. In this context, the book reports on new concepts in this fascinating discipline, and features chapters on state-of-the art methods for studying behavior tied to substrate-borne vibrations, as well as an entire section on applied biotremology. Also included are a historical contribution by pioneers in the field and several chapters reviewing the advances that have been made regarding specific animal taxa. Other new topics covered are vibrational communication in vertebrates, multimodal communication, and biotremology in the classroom, as well as in art and music. Given its scope, the book will appeal to all those interested in communication and vibrational behavior, but also to those seeking to learn about an ancient mode of communication.