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Autore	Avery Mark
Titolo	Birds and Forestry // Mark Avery and Roderick Leslie
Pubbl/distr/stampa	London : , : T & AD Poyser, , 1990
ISBN	9786612986468 1-282-98646-5 1-4081-3766-6 1-4081-3767-4
Edizione	[1st ed.]
Descrizione fisica	1 online resource (312 p.)
Collana	Poyser Monographs
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Soggetti	Birds - Habitat - Great Britain Birds - Geographical distribution
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
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Nota di bibliografia	Includes bibliographical references (p. 274-289) and index.
Nota di contenuto	Cover -- Copyright page -- Contents -- List of photographs -- List of figures -- List of tables -- Foreword -- Preface -- Acknowledgements -- CHAPTER 01 - Introduction -- CHAPTER 02 - Birds in forests -- CHAPTER 03 - Managing the forest -- CHAPTER 04 - Conservation management -- CHAPTER 05 - The birds of the uplands -- CHAPTER 06 - The effects of afforestation on upland birds -- CHAPTER 07 - Case studies -- CHAPTER 08 - Money and power in the uplands -- CHAPTER 09 - The future -- References -- Appendix.

2. Record Nr.	UNINA9910828783503321
Autore	Reilly J. Patrick
Titolo	Applied Bioelectricity : From Electrical Stimulation to Electropathology / / by J. Patrick Reilly
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 1998
ISBN	1-4612-1664-8
Edizione	[1st ed. 1998.]
Descrizione fisica	1 online resource (XIX, 563 p.)
Altri autori (Persone)	ReillyJ. Patrick
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Soggetti	Neurosciences Biophysics Biological physics Biomedical engineering Human physiology Animal physiology Biological and Medical Physics, Biophysics Biomedical Engineering and Bioengineering Human Physiology Animal Physiology
Lingua di pubblicazione	Inglese
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Note generali	"Adapted from Electrical stimulation and electropathology, Cambridge University Press, 1992"--Title page verso. "With 241 figures."
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1 Introduction -- 1.1 General Perspective -- 1.2 Electrical Exposure -- 1.3 Scales of Short-Term Reactions to Contact Current -- 1.4 Reactions to Electric and Magnetic Field Stimulation -- 1.5 Variables Affecting Thresholds -- 2 Impedance and Current Distribution -- 2.1 Dielectric Properties of Biological Materials -- 2.2 Skin Impedance -- 2.3 Total Body Impedance: Low-Frequency and DC -- 2.4 Impedance at Higher Frequencies -- 2.5 Impedance Through Foot Contact -- 2.6 High- Voltage and Transient Properties -- 2.7 Impedance of Domestic Animals -- 3 Electrical Principles of Nerve and Muscle Function -- 3.1 Introduction -- 3.2 Cellular Membranes -- 3.3 The Excitable Nerve Membrane -- 3.4 Action Potential Models for Cardiac Tissue -- 3.5 Sensory Transduction -- 3.6 Muscle Function -- 3.7 Synapses -- 3.8

The Spinal Reflex -- 4 Excitation Models -- 4.1 Introduction -- 4.2 Linear Strength-Duration Model -- 4.3 Electrical Cable Representations -- 4.4 Myelinated Nerve Model -- 4.5 Response to Monophasic Stimulation -- 4.6 Response to Biphasic and Repetitive Stimuli -- 4.7 Parameter Variation Effects -- 5 Electrical Properties of the Heart -- 5.1 Cardiovascular System: General Anatomical and Functional Aspects -- 5.2 Origin and Spread of Excitation -- 5.3 Elementary Processes of Excitation and Contraction -- 5.4 Stimulation, Propagation, and Refractoriness -- 5.5 Regular and Ectopic Pacemakers -- 5.6 Effects of Autonomic Nerves and of Changes in Electrolyte Composition -- 5.7 Electrocardiogram -- 5.8 Abnormalities in Cardiac Rhythm as Reflected in the ECG -- 5.9 Mechanism of Flutter and Fibrillation -- 5.10 Vulnerable Period: Threshold for Fibrillation -- 5.11 Electrical Defibrillation -- 6 Cardiac Sensitivity to Electrical Stimulation -- 6.1 Introduction -- 6.2 Threshold Sensitivity with Respect to Cardiac Cycle -- 6.3 Strength-Duration Relations for Unidirectional Currents -- 6.4 Biphasic and Sinusoidal Stimulation -- 6.5 Duration Sensitivity for Oscillatory Stimuli -- 6.6 Energy Criteria and Impulse Currents -- 6.7 Body-Size Scaling -- 6.8 Statistical Distribution of Thresholds -- 6.9 Combined AC and DC Stimuli -- 6.10 Electrodes and Current Density -- 7 Sensory Responses to Electrical Stimulation -- 7.1 Introduction -- 7.2 Mechanisms of Electrical Transduction -- 7.3 Perception of Transient Monophasic Currents -- 7.4 Suprathreshold Responses -- 7.5 Stimulus Waveform Factors -- 7.6 Electrodes and Current Density -- 7.7 Body Location Sensitivity -- 7.8 Skin Temperature -- 7.9 Tactile Masking -- 7.10 Individual Differences in Electrical Sensitivity -- 7.11 Startle Reactions -- 7.12 Electrical Stimulation of Domestic Animals -- 7.13 Visual and Auditory Effects -- 8 Skeletal Muscle Response to Electrical Stimulation -- 8.1 Introduction -- 8.2 Neuromuscular Structure and Function -- 8.3 Fundamental Principles of Skeletal Muscle Electrical Stimulation -- 8.4 Functional Neuromuscular Stimulation Systems -- 8.5 Skeletal Muscle Stimulation in Electrical Accidents -- 8.6 Analysis of the Let-Go Phenomenon -- 8.7 Effects of Electrical Stimulation on Respiration -- 9 Stimulation via Electric and Magnetic Fields -- 9.1 Introduction -- 9.2 Electric Field Induction Principles -- 9.3 Direct Perception of ELF Electric Fields -- 9.4 Human Reactions to AC Electric Field-Induced Shock -- 9.5 Time-Varying Magnetic Field Induction -- 9.6 Principles of Excitation by Time-Varying Magnetic Fields -- 9.7 Experimental Investigations of Magnetic Excitation: Large Area Exposure -- 9.8 Visual and Auditory Reactions to Electromagnetic Exposure -- 9.9 Local Magnetic Stimulation -- 9.10 Scales of Reaction: Power Frequency -- 9.11 Magnetic Forces on Moving Charges -- 10 High-Voltage and High-Current Injuries -- 10.1 Introduction -- 10.2 Modes of Injury -- 10.3 Impedance Considerations and Current Distribution in the Body -- 10.4 Thermal Trauma -- 10.5 Nonthermal Trauma -- 10.6 Lightning Injuries -- 10.7 Clinical Observations -- 10.8 Clinical Treatment -- 11 Standards and Rationale -- 11.1 Introduction -- 11.2 Electromagnetic Field Exposure Standards -- 11.3 Pulsed Electromagnetic Fields -- 11.4 Consideration of Spark Discharges in EMF Standards -- 11.5 Absorbed Energy and Thermal Considerations in EMF Standards -- 11.6 Consideration of EMF Interaction Mechanisms in Standards Setting -- 11.7 ELF Magnetic Field Standards Derived from Established Mechanisms -- 11.8 Standards in Consumer Products and Installations -- References.

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## Sommario/riassunto

Electric currents and electromagnetic fields have been applied to biological systems, particularly humans, with both therapeutic and pathological results. Applied Bioelectricity discusses biological responses to electric currents and electromagnetic fields, including

medical applications and shock hazards. The book covers fundamental physical and engineering principles of responses to short-term electrical exposure and emphasizes human reactions, although animal responses to electricity are considered as well. The treatment covers reactions from the just-detectable to the clearly detrimental. An important new chapter discusses standards for human exposure to electromagnetic fields and electric current and demonstrates how these standards have been developed based on the principles treated in earlier chapters. J. Patrick Reilly is a member of the principal staff of the Johns Hopkins University Applied Physics Laboratory and is President of Metatec Associates.

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