

## Associate Certified Entomologist Study Guide

Larry Pedigo and Marlin Rice have produced the top pest management textbook on the market for decades. New co-author Rayda Krell has helped bring the book into the twenty-first century. The successful core concepts of the book—understanding pests in their environment and using an ecological approach to combat them—remain as robust as ever. Features that instructors have come to rely on have been retained, including insect diagnostic boxes with detailed information on important species and species groups and an appendix with keys to major insect orders. New material on genetically modified plant species and regional pest technologies complement concepts in basic and applied entomology. Taxonomies and systematics of insects have been updated throughout the book.

Get complete coverage of all the objectives included on the EC-Council's Certified Ethical Hacker exam inside this comprehensive resource. Written by an IT security expert, this authoritative guide covers the vendor-neutral CEH exam in full detail. You'll find learning objectives at the beginning of each chapter, exam tips, practice exam questions, and in-depth explanations. Designed to help you pass the exam with ease, this definitive volume also serves as an essential on-the-job reference. **COVERS ALL EXAM TOPICS, INCLUDING:** Introduction to ethical hacking Cryptography Reconnaissance and footprinting Network scanning Enumeration System hacking Evasion techniques Social engineering and physical security Hacking web servers and applications SQL injection Viruses, trojans, and other attacks Wireless hacking Penetration testing Electronic content includes: Two practice exams Bonus appendix with author's recommended tools, sites, and references

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"Bibliographic references to works pertaining to the taxonomy of Coleoptera published between 1758 and 1900 in the non-periodical literature are listed. Each reference includes the full name of the author, the year or range of years of the publication, the title in full, the publisher and place of publication, the pagination with the number of plates, and the size of the work. This information is followed by the date of publication found in the work itself, the dates found from external sources, and the libraries consulted for the work. Overall, more than 990 works published by 622 primary authors are listed. For each of these authors, a biographic notice (if information was available) is given along with the references consulted"--[p. 1].

Edible insects have always been a part of human diets, but in some societies there remains a degree of disdain and

disgust for their consumption. Insects offer a significant opportunity to merge traditional knowledge and modern science to improve human food security worldwide. This publication describes the contribution of insects to food security and examines future prospects for raising insects at a commercial scale to improve food and feed production, diversify diets, and support livelihoods in both developing and developed countries. Edible insects are a promising alternative to the conventional production of meat, either for direct human consumption or for indirect use as feedstock. This publication will boost awareness of the many valuable roles that insects play in sustaining nature and human life, and it will stimulate debate on the expansion of the use of insects as food and feed.

The sterile insect technique (SIT) is an environment-friendly method of pest control that integrates well into area-wide integrated pest management (AW-IPM) programmes. This book takes a generic, thematic, comprehensive, and global approach in describing the principles and practice of the SIT. The strengths and weaknesses, and successes and failures, of the SIT are evaluated openly and fairly from a scientific perspective. The SIT is applicable to some major pests of plant-, animal-, and human-health importance, and criteria are provided to guide in the selection of pests appropriate for the SIT. In the second edition, all aspects of the SIT have been updated and the content considerably expanded. A great variety of subjects is covered, from the history of the SIT to improved prospects for its future application. The major chapters discuss the principles and technical components of applying sterile insects. The four main strategic options in using the SIT — suppression, containment, prevention, and eradication — with examples of each option are described in detail. Other chapters deal with supportive technologies, economic, environmental, and management considerations, and the socio-economic impact of AW-IPM programmes that integrate the SIT. In addition, this second edition includes six new chapters covering the latest developments in the technology: managing pathogens in insect mass-rearing, using symbionts and modern molecular technologies in support of the SIT, applying post-factory nutritional, hormonal, and semiochemical treatments, applying the SIT to eradicate outbreaks of invasive pests, and using the SIT against mosquito vectors of disease. This book will be useful reading for students in animal-, human-, and plant-health courses. The in-depth reviews of all aspects of the SIT and its integration into AW-IPM programmes, complete with extensive lists of scientific references, will be of great value to researchers, teachers, animal-, human-, and plant-health practitioners, and policy makers.

Arthropods are the most numerous and diverse group of animals and studying them requires the use of specialized equipment and specific procedures. This text describes effective methods and equipment for collecting, identifying, rearing, examining, and preserving insects and mites, and explains how to store and care for specimens in collections. It also provides instructions for the construction of many kinds of collecting equipment, traps, rearing cages, and storage units, as well as updated and illustrated keys

for identification of the classes of arthropods and the orders of insects. Such information not only aids hobbyists and professionals in preparing insect collections, but it has become essential in documenting and standardizing collections of entomological evidence in forensic as well as pest management sciences. \* Over 400 professionally drawn illustrations \* Identification keys to find arthropod orders \* Comprehensive reading list \* Detailed glossary of terms

The Georgia Pest Management Handbook provides current information on selection, application, and safe use of pest control chemicals. This handbook has recommendations for pest control around homes and on pets; for pests of home garden vegetables, fruits, and ornamentals; and for pests of public health interest associated with our homes. Cultural, biological, physical, and other types of control are recommended where appropriate. Pesticide recommendations are based on information on the manufacturer labels and on performance data from research and extension trials at the University of Georgia and its sister institutions. Because environmental conditions, the severity of pest pressure, and methods of application vary widely, recommendations do not imply that performance of pesticides will always be acceptable. This publication is intended to be used only as a guide. Trade and brand names are used only for information. The University of Georgia does not guarantee nor warrant published standards on any product mentioned; nor does the use of a trade or brand name imply approval of any product to the exclusion of others that may also be suitable. Always follow the use instructions and precautions on the pesticide label. For questions, concerns, or improvement suggestions regarding the Georgia Pest Management Handbook, please contact your county agent.

Viewed through the eyes of entomologists and scientists who believe in a Creator God, the chapters discuss the design, nature, and purpose of insects in the world while at the same time showing the beauty and diversity of insects.

As a species, the German cockroach is one of the most widespread indoor urban pests worldwide. While numerous products have been developed to control their spread, German cockroaches continue to contaminate food, transmit disease and cause significant, long-term economic expense to homes, restaurants, hospitals and more. *Biology and Management of the German Cockroach* summarises the many advances in management technology, products, delivery systems, and basic and applied research over the past 25 years. Leading researchers explain why the German cockroach is a medically important pest and how its microbiome can provide new insights on cockroach physiology and potential novel targets for control. The authors also address the research from a practical standpoint, detailing why baits have replaced sprays as the primary method of control and how population genetic studies allow for better understanding of cockroach dispersal and population structure. Leading experts on integrated pest management (IPM) explore how studies on German cockroach control programs demonstrate the value and feasibility of IPM in urban environments. This book provides the reader with a comprehensive understanding of the German cockroach and will be a valuable reference for researchers, graduate students, pest management professionals, health workers and government agencies dealing with urban pests and pesticides.

For training that is as fun as it is effective, this is a must-have resource for anyone involved in training. Detailing the “who,”

“what,” “when,” “why” and “how” of learning, *Telling Ain't Training* provides everything you need to energise and engage leaders regardless of age experience. Fast-paced, fun and interactive, *Telling Ain't Training* incorporates principles of adult learning to separate learning myth from learning fact. Understand how people learn, what makes training successful, why training fails and how to achieve amazing training results.

A companion to 'Urban Pest Management', this book builds on the issues of insect pests in urban settings to discuss control strategies that look beyond products. From an environmental and health perspective, it is not always practical to spray chemicals indoors or in urban settings, so this work discusses sustainable control and best practice methods for managing insects that are vectors of disease, nuisance pests and the cause of structural damage.

Widespread use of broad-spectrum chemical pesticides has revolutionized pest management. But there is growing concern about environmental contamination and human health risks--and continuing frustration over the ability of pests to develop resistance to pesticides. In *Ecologically Based Pest Management*, an expert committee advocates the sweeping adoption of ecologically based pest management (EBPM) that promotes both agricultural productivity and a balanced ecosystem. This volume offers a vision and strategies for creating a solid, comprehensive knowledge base to support a pest management system that incorporates ecosystem processes supplemented by a continuum of inputs--biological organisms, products, cultivars, and cultural controls. The result will be safe, profitable, and durable pest management strategies. The book evaluates the feasibility of EBPM and examines how best to move beyond optimal examples into the mainstream of agriculture. The committee stresses the need for information, identifies research priorities in the biological as well as socioeconomic realm, and suggests institutional structures for a multidisciplinary research effort. *Ecologically Based Pest Management* addresses risk assessment, risk management, and public oversight of EBPM. The volume also overviews the history of pest management--from the use of sulfur compounds in 1000 B.C. to the emergence of transgenic technology. *Ecologically Based Pest Management* will be vitally important to the agrichemical industry; policymakers, regulators, and scientists in agriculture and forestry; biologists, researchers, and environmental advocates; and interested growers.

The first edition of *Forensic Entomology: The Utility of Arthropods in Legal Investigations* broke ground on all levels, from the caliber of information provided to the inclusion of copious color photographs. With over 100 additional color photographs, an expanded reference appendix, and updated information, the second edition has raised the bar for resources in this field, elucidating the basics on insects of forensic importance. New in the Second Edition: A chapter on insect identification that presents dichotomous keys Updates on DNA molecular techniques and genetic markers Coverage of new standardization in forensic entomological analysis Chapters on climatology and thermoregulation in insects 100 new color photographs, making available a total of 650 color photographs Goes Beyond Dramatics to the Nitty Gritty of Real Practice While many books, movies, and television shows have made forensic entomology popular, this book makes it real. Going beyond dramatics to the nitty gritty of actual practice, it covers what to search for when recovering entomological evidence, how to handle items found at the crime

scene, and how to use entomological knowledge in legal investigations.

While there are several recent books on this emerging field, *Veterinary Forensic Medicine and Forensic Sciences* sets the bar, covering all relevant aspects in a succinct, easy-to-read, comprehensive format designed to be taught in a single-semester course. Intended to be the premier textbook on veterinary forensic sciences, the book covers the application of veterinary forensic medicine to cases, including the medical perspective as well as law enforcement response, crime scene management, and evidence recovery issues. Coverage includes the scientific and legal principles for veterinary forensic evidence. This clearly delineates it from veterinary-only practices, since the forensic aspects present additional challenges that include evidence recovery and preservation, report writing, and maintaining an evidentiary chain of custody, all the way through expert witness testimony. Some emerging topics that are covered include DNA and genetic evidence, entomological evidence in support of veterinary forensics, animal fighting, situational deaths, including poisonings, domestic violence, and cruelty, sharp and blunt force trauma, gunshot and wound ballistics, sexual assault, nonhuman odontology and osteology, and more. Features Details a process for forensic science case management for humane law enforcement agencies Presents multiple chapters on specific types of trauma analysis in animals Provides developments on current trends in forensic entomology as applied to wildlife crime and minimum postmortem interval determinations Explores national and international considerations in combating organized animal fighting Offers DNA applications for wildlife crime and environmental monitoring Outlines current animal and environmental forensic toxicology legal casework This text offers a straightforward presentation of current practices and includes several real-world case examples throughout to illustrate concepts. Fully illustrated with more than 280 full-color images, *Veterinary Forensic Medicine and Forensic Sciences* provides the latest in advances and up-to-date field techniques, applicable for student instruction in the classroom and beyond.

Scores of talented and dedicated people serve the forensic science community, performing vitally important work. However, they are often constrained by lack of adequate resources, sound policies, and national support. It is clear that change and advancements, both systematic and scientific, are needed in a number of forensic science disciplines to ensure the reliability of work, establish enforceable standards, and promote best practices with consistent application. *Strengthening Forensic Science in the United States: A Path Forward* provides a detailed plan for addressing these needs and suggests the creation of a new government entity, the National Institute of Forensic Science, to establish and enforce standards within the forensic science community. The benefits of improving and regulating the forensic science disciplines are clear: assisting law enforcement officials, enhancing homeland security, and reducing the risk of wrongful conviction and exoneration. *Strengthening Forensic Science in the United States* gives a full account of what is needed to advance the forensic science disciplines, including upgrading of systems and organizational structures, better training, widespread adoption of uniform and enforceable best practices, and mandatory certification and accreditation programs. While this book provides an essential call-to-action for congress and policy makers, it also serves as a vital tool for law enforcement agencies, criminal prosecutors and attorneys, and forensic science educators.

The second half of the 20th century and the beginning of the 21st century witnessed important changes in ecology, climate and human behaviour that favoured the development of urban pests. Most alarmingly, urban planners now face the dramatic expansion of urban sprawl, in which city suburbs are growing into the natural habitats of ticks, rodents and other pests. Also, many city managers now erroneously assume that pest-borne diseases are relics of the past. All these changes make timely a new analysis of the direct and indirect effects of present-day urban pests on health. Such an analysis should lead to the development of strategies to manage them and reduce the risk of exposure. To this end, WHO invited international experts in various fields - pests, pest-related diseases and pest management - to provide evidence on which to base policies. These experts identified the public health risk posed by various pests and appropriate measures to prevent and control them. This book presents their conclusions and formulates policy options for all levels of decision-making to manage pests and pest-related diseases in the future. [Ed.]

The first book in two decades to address this multi-faceted field, *The Toxicology and Biochemistry of Insecticides* provides the most up-to-date information on insecticide classification, formulation, mode of action, resistance, metabolism, environmental fate, and regulatory legislation. The book draws on the author's groundbreaking research in insect detoxification. It discusses mechanisms at the molecular level such as specific enzymes that contribute to insecticide resistance, the modification of which can change insecticide susceptibility and influence host plant selections in phytophagous insects. Beginning with a general introduction, eleven chapters integrate classical toxicology with physiology, biochemistry, and molecular biology to present a comprehensive look at the field. The book discusses the demand and formulation of pesticides and describes each type from dusts and powders to baits and aerosols. It classifies insecticides by target, chemical compound, and mechanism; evaluates toxicity testing procedures; explains pesticide uptake, mode of action, and metabolism; and explores species differences, resistance, and interactions. It also considers pesticides in the environment and federal and state regulatory legislation and enforcement. A long-awaited, state-of-the-science review on insect toxicology, this indispensable book brings you up-to-date on the many aspects and implications of pesticide use and provides the necessary background and platform from which to conduct future research.

This reference guide provides information about basic ant biology, ant identification, inspection tips and control strategies for managing ant infestations.

Although usually treated as unified subject, in many respects the two components of what is broadly described as 'medical and veterinary entomology' are clearly distinct. As used loosely here to refer to both insects and arachnids. In medical entomology blood-feeding Diptera are of paramount importance, primarily as vectors of pathogenic disease. Most existing textbooks reflect this bias. However, in veterinary entomology ectoparasites such as the mites, fleas or dipteran agents of myiasis assume far greater prominence and the most important effects of their parasitic activity may be mechanical damage, pruritus, blood loss, myiasis, hypersensitivity and dermatitis, in addition to vector-borne pathogenic disease. Ectoparasite

infestation of domestic and companion animals, therefore, has clinical consequences necessitating a distinct approach to diagnosis and control. The aim of this book is to introduce the behaviour, ecology, pathology and control of arthropod ectoparasites of domestic animals to students and practitioners of veterinary medicine, animal husbandry and applied biology. Since the book is directed primarily at the non-entomologist, some simplification of a number of the more involved entomological issues has been deemed necessary to improve the book's logical structure and comprehensibility, and keep its length within limits. A reading list is presented at the end of each chapter to act as a stepping-stone into the specialist literature.

"In the tenth installment of the BE WHAT YOU WANT series, *So, You Want to Work With Animals?* introduces readers to the diverse fields that work hands-on with animals of all shapes, sizes, and species. From what classes to take in school to exploring what these jobs are really like--the fun stuff, the hard stuff, and even the gross stuff, this book reveals the steps it takes to pursue a childhood dream. Whether animals are big or small, domestic or wild, there are many careers that provide rewarding experiences such as: - Veterinarian - Zookeeper - Wildlife Photographer - K9 Officer - Marine Biologist - And more! In addition to tips and interviews from animal experts in professional industries, *So, You Want to Work with Animals?* includes inspiring stories from kids who currently work with animals as well as activities, a glossary, and resources to help kids pave the path to their dream job! Jane (J. M.) Bedell spent her childhood daydreaming in hayfields, talking to cows, and finding heroes between the pages of books. She is a full-time writer of historical fiction and nonfiction for children. She received her MFA in creative writing from Hamline University in Minnesota. She lives in rural Oregon with her husband and a plethora of animals. Visit her at [jmbedell.com](http://jmbedell.com)."--

Covers all facets of geriatric forensic medicine and pathology, from natural changes, trauma and dementias, to toxicology and scene investigation.

This national award winning book was developed especially for Master Gardener volunteers and home gardeners and is a primary source for research-based information on gardening and landscaping successfully in North Carolina and the Southeast. A fundamental reference for any seasoned gardener, the North Carolina Extension Gardener Handbook is also written to appeal to beginners just getting their hands dirty. It explains the "why and how" basics of gardening from soils and composting to vegetable gardening and wildlife management. Advice on garden design, preparation, and maintenance covers all types of plantings including lawns, ornamentals, fruits, trees, and containers. This handbook provides color images, detailed graphics, diagnostic tables, case studies, frequently asked questions, and specific management strategies for insects, diseases, weeds, and other pests. Written by a team of the state's leading horticulture experts, it contains a wealth of information to support you in creating and managing thriving gardens, lawns, and landscapes. The North Carolina Extension Gardener Handbook is an essential book for serious gardeners in North Carolina and the Southeast. Want to learn more? \* Visit [go.ncsu.edu/eg-handbook](http://go.ncsu.edu/eg-handbook) to view information contained in this book in an open access format. \* Access free gardening resources from NC State Extension by visiting [gardening.ces.ncsu.edu](http://gardening.ces.ncsu.edu). \* Find the Extension center in your county to speak with local experts by visiting [www.ces.ncsu.edu/directory](http://www.ces.ncsu.edu/directory). \* Become a Master Gardener volunteer and join an outstanding group of life-long learners working

together to change the world. Learn how at [ncemgv.org](http://ncemgv.org).

Insect pest control continues to be a challenge for agricultural producers and researchers. Insect resistance to commonly used pesticides and the removal of toxic pesticides from the market have taken their toll on the ability of agricultural producers to produce high quality, pest-free crops within economical means. In addition to this, they must not endanger their workers or the environment. We depend on agriculture for food, feed, and fiber, making it an essential part of our economy. Many people take agriculture for granted while voicing concern over adverse effects of agricultural production practices on the environment. Insect Pest Management presents a balanced overview of environmentally safe and ecologically sound practices for managing insects. This book covers specific ecological measures, environmentally acceptable physical control measures, use of chemical pesticides, and a detailed account of agronomic and other cultural practices. It also includes a chapter on state-of-the-art integrated pest management based, a section on biological control, and lastly a section devoted to legal and legislative issues. Insect Pest Management approaches its subject in a systematic and comprehensive manner. It serves as a useful resource for professionals in the fields of entomology, agronomy, horticulture, ecology, and environmental sciences, as well as to agricultural producers, industrial chemists, and people concerned with regulatory and legislative issues.

Associate Certified Entomologist ACE is a certification program for pest management professionals who have strong training and experience in insect-related work without having gone through any relevant formal academic training. The program is for permanent residents of the United States who hold a current applicator's license. The 4 major knowledge domains are Inspection and Identification, Monitoring, Selection and Implementation of Control Methods, and Evaluation. The pests covered include Biting and Stinging, Flies (Order Diptera), Ants (Family Formicidae), Cockroaches (Order Dictyoptera; Alt. Blattaria), Stored Product and Fabric Pests, Wood Destroying Insects, Occasional Invaders and General Household Pests, and Common Commensal Pests (Non-arthropod). We create these self-practice test questions module referencing the principles and concepts currently valid in the pest management trade. They are for reinforcing learning, NOT for simulating "real" questions. Each question comes with an answer and a short explanation which aids you in seeking further study information. For purpose of exam readiness drilling, this product includes questions that have varying numbers of choices. Some have 2 while some have 5 or 6. We want to make sure these questions are tough enough to really test your readiness and draw your focus to the weak areas. You should use this product together with other study resources for the best possible exam prep coverage.

The book deals with the present state and problems of integrated pest management (IPM) as relating to stakeholder acceptance of IPM and how IPM can become a sustainable practice. The book covers the implementation of integrated pest management in USA, Canada, Denmark, Germany, Italy, Sweden, Netherlands, China, India, Indonesia, Australia, Africa, and its impact in reducing pesticide use in agriculture. The book also deals with the impact of transgenic crops on pesticide use.

Entomology is that branch of zoology which deals with the study of insects. It studies the structure, classification, biological systems, nature, habitats, etc. of insects in detail. This book attempts to understand the multiple topics that fall under the discipline of entomology and how such concepts have practical applications and effects in the ecosystem. It picks up individual branches and explains their need and contribution in the context of the growth of this area. The textbook also explains the various practices that highlight the conservation of the

environment. Coherent flow of topics, student-friendly language and extensive use of examples make this text an invaluable source of knowledge.

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