VERTEBRATE PEST CONTROL AND MANAGEMENT MATERIALS

Proceedings of the Third Symposium on Test Methods for Vertebrate Pest Control and Management Materials

A symposium sponsored by ASTM Committee E-35 on Pesticides
AMERICAN SOCIETY FOR TESTING AND MATERIALS
Fresno, Calif., 7 March 1980

ASTM SPECIAL TECHNICAL PUBLICATION 752
E. W. Schafer, Jr., and C. R. Walker, U.S. Fish and Wildlife Service, editors

ASTM Publication Code Number (PCN) 04-752000-48

AMERICAN SOCIETY FOR TESTING AND MATERIALS
1916 Race Street, Philadelphia, Pa. 19103
NOTE

The Society is not responsible, as a body, for the statements and opinions advanced in this publication.
Foreword

The third symposium on Test Methods for Vertebrate Pest Control and Management Materials was sponsored by the American Society for Testing and Materials, through its Committee E-35 on Pesticides, in cooperation with the Ninth California Vertebrate Pest Conference. The meeting was held in two half-day sessions on 7 March 1980 in Fresno, Calif. The symposium chairmen were D. A. Wade, Texas Agricultural Extension Service, and W. B. Jackson, Bowling Green State University. The session chairmen were W. B. Jackson, J. R. Beck, Ecological Environmental Consultant Services, Inc., R. E. Marsh, University of California at Davis, and Robert Timm, University of Nebraska at Lincoln. Serving as editors of this publication were E. W. Schafer, Jr., and C. R. Walker, both of the U.S. Fish and Wildlife Service.
Related
ASTM Publications

Test Methods for Vertebrate Pest Control and Management Materials, STP 625 (1977), $26.00, 04-625000-48

Vertebrate Pest Control and Management Materials: Second Conference, STP 680 (1979), $31.50, 04-680000-48

Avian and Mammalian Wildlife Toxicology, STP 693 (1979), $16.25, 04-693000-48

Aquatic Toxicology: Second Conference, STP 667 (1979), $37.75, 04-667000-16

Aquatic Toxicology: Third Conference, STP 707 (1980), $39.50, 04-707000-16
A Note of Appreciation to Reviewers

This publication is made possible by the authors and, also, the unheralded efforts of the reviewers. This body of technical experts whose dedication, sacrifice of time and effort, and collective wisdom in reviewing the papers must be acknowledged. The quality level of ASTM publications is a direct function of their respected opinions. On behalf of ASTM we acknowledge with appreciation their contribution.

ASTM Committee on Publications
Editorial Staff

Jane B. Wheeler, Managing Editor
Helen M. Hoersch, Senior Associate Editor
Helen P. Mahy, Senior Assistant Editor
Allan S. Kleinberg, Assistant Editor
Contents

Introduction

1

Legal, Scientific, and Political Cooperation—The Impossible Dream—J. R. BECK

3

BIRDS

Suggested Methods for Determining the Efficacy of Vertebrate Control Agents in Developing Countries—R. L. BRUGGERS AND W. B. JACKSON

15

Nonspill Cage Feeder for Quail—R. B. BRUNTON AND E. W. SCHAFER, JR.

29

Improved Method of Assessing Pesticide Hazards to Nontarget Game Birds Under Simulated Field Conditions—J. F. GLAHN AND L. D. LAMPER

32

Approach for Assessing Feed Loss Damage by Starlings at Livestock Feedlots—J. F. GLAHN AND D. L. OTIS

38


46


52

Methods for Assessing the Efficiency of Aerial Spraying Control Operations on Quelea Colonies and Roosts—C. C. H. ELLIOTT

62

MAMMALS

Field Method for Evaluation of Rodenticides for Control of Microtus pinetorum in Apple Orchards—R. E. BYERS

77

Analytical Techniques for Fluorescent Chemicals Used as Systemic or External Wildlife Markers—B. E. JOHNS AND H. P. PAN

86
Method for Analysis of Rat Acceptance Data Generated in Anticoagulant Bait Bioassays—S. D. PALMATEER

Comparison of Environmental Protection Agency and Company Laboratory Efficacy Data for Federally Registered Rat and Mouse Toxicants—D. B. PEACOCK AND S. D. PALMATEER

Considerations in the Design of Test Methods for Measuring Bait Shyness—R. J. ROBBINS

Estimating Population Abundance of Ground Squirrels (Genus Spermophilus): A Review—DENNIS STROUD

Trends of Predator Losses of Sheep and Lambs Calculated from U.S. Department of Agriculture Mortality Statistics—C. E. TERRILL

Fish

Plastic Enclosures and Containers for Evaluating the Efficacy and Safety of Pesticides in Aquatic Environments—C. R. WALKER, R. M. BURRESS, AND P. A. GILDERHUS

Simulated Field Testing Methods for Pest Control Agents in Lotic and Lentic Ecosystems—P. A. GILDERHUS, R. M. BURRESS, AND C. R. WALKER

Recommended Practice for Determining the Effectiveness and Safety of Aquatic Animal Control Agents in Static Water Studies—JOHN MCCANN AND C. R. WALKER

Reducing Potential Hazards of Pesticides to Fish, Wildlife, and Habitat—C. R. WALKER

Summary

Index