

USE OF ELEMENTAL MARKERS IN THE STUDY OF ARTHROPOD  
MOVEMENT AND TROPHIC INTERACTIONS

Edited By

D. H. Akey, J. L. Hayes, and S. J. Fleischer

CONTENTS

A REVIEW OF MARKING TECHNIQUES IN ARTHROPODS  
AND AN INTRODUCTION TO ELEMENTAL MARKING  
D. H. Akey . . . . . 1

A PERSONAL HISTORY OF THE DEVELOPMENT OF THE  
RUBIDIUM MARKING TECHNIQUE  
M. W. Stimmann . . . . . 9

THE USES OF ELEMENTAL MARKING FOR INSECT DISPERSAL  
AND MATING COMPETITIVENESS STUDIES: FROM THE  
LABORATORY TO THE FIELD  
R. A. Van Steenwyk . . . . . 15

ANALYTICAL CONSIDERATION AND METHODOLOGIES FOR  
ELEMENTAL DETERMINATIONS IN BIOLOGICAL SAMPLES  
D. H. Akey and D. W. Burns . . . . . 25

ELEMENTAL MARKING OF ARTHROPOD PESTS IN  
AGRICULTURAL SYSTEMS: SINGLE AND  
MULTIGENERATIONAL MARKING  
J. L. Hayes . . . . . 37

ELEMENTAL MARKING IN DECIDUOUS AND CONIFEROUS  
TREE SYSTEMS  
S. J. Fleischer, J. R. Bridges, F. W. Ravlin, and W. T. Thoeny . . . . . 49

ELEMENTS AS MARKERS IN STUDIES OF HOST SELECTION  
AND DISPERSAL BY ARTHROPOD PARASITES OF  
VERTEBRATE HOSTS  
R. B. Kimsey, R. Anderson, J. B. Edman, and A. Spielman . . . . . 57

ELEMENTAL MARKERS FOR ENTOMOPHAGOUS INSECTS  
C. G. Jackson . . . . . 65

ECOLOGICAL APPLICATIONS OF ELEMENTAL LABELING:  
ANALYSIS OF DISPERSAL, DENSITY, MORTALITY, AND  
FEEDING  
K. R. Hopper . . . . . 71

APPENDIX A: ADDRESSES OF AUTHORS . . . . . 85

APPENDIX B: A CALL FOR UNIFORMITY IN REPORTING  
TRACE ELEMENT CONCENTRATIONS . . . . . 87