

THE BIOLOGY AND MANAGEMENT OF WILD RUMINANTS

CHAPTER ONE

PHYSICAL CHARACTERISTICS

by

Aaron N. Moen

Professor of Wildlife Ecology

Department of Natural Resources

College of Agriculture and Life Sciences

Cornell University

Ithaca, N.Y. 14853

and

Certified Wildlife Biologist

(The Wildlife Society)

Published by

CornerBrook Press  
Box 106  
Lansing, N.Y. 14882

Copyright © 1980 by Aaron N. Moen

No part of this book may be reproduced by any mechanical, photographic or electronic process, or in the form of a phonograph recording, nor may it be stored in a retrieval system, transmitted, or otherwise copied for public or private use without written permission of

Aaron N. Moen

## CONTENTS OF CHAPTER ONE

|  |    |
|--|----|
| TOPIC 1. MASS, WEIGHT, AND GROWTH . . . . .  | 1  |
| UNIT 1.1: FETAL WEIGHTS AND GROWTH . . . . .                                       | 3  |
| UNIT 1.1: REFERENCES . . . . .   | 4  |
| UNIT 1.2: SUCKLING WEIGHTS AND GROWTH . . . . .                                    | 7  |
| UNIT 1.2: REFERENCES . . . . .   | 7  |
| UNIT 1.3: ADULT WEIGHTS AND GROWTH . . . . .                                       | 11 |
| UNIT 1.3: REFERENCES . . . . .   | 13 |
| UNIT 1.4: SEASONAL VARIATIONS IN WEIGHTS . . . . .                                 | 17 |
| UNIT 1.4: REFERENCES . . . . .   | 21 |
| UNIT 1.5: LIVE WEIGHT, INGESTA-FREE, AND DRESSED WEIGHT<br>RELATIONSHIPS . . . . . | 23 |
| UNIT 1.5: REFERENCES . . . . .   | 25 |
| TOPIC 2. GEOMETRY . . . . .  | 27 |
| UNIT 2.1: LINEAR MEASURMENTS . . . . .   | 28 |
| UNIT 2.1: REFERENCES . . . . .   | 29 |
| UNIT 2.2: VERTICAL PROFILES . . . . .  | 33 |
| UNIT 2.2: REFERENCES . . . . .   | 35 |
| UNIT 2.3: SURFACE AREAS . . . . .  | 37 |
| UNIT 2.3: REFERENCES . . . . .   | 39 |
| UNIT 2.4: BED AREAS . . . . .  | 41 |
| UNIT 2.4: REFERENCES . . . . .   | 43 |
| TOPIC 3. SYSTEMS CHARACTERISTICS . . . . .   | 45 |
| UNIT 3.1: GASTROINTESTINAL SYSTEM CHARACTERISTICS . . . . .                        | 47 |
| UNIT 3.1: REFERENCES . . . . .   | 50 |
| UNIT 3.2: CARDIOVASCULAR SYSTEM CHARACTERISTICS . . . . .                          | 53 |
| UNIT 3.2: REFERENCES . . . . .   | 55 |
| UNIT 3.3: RESPIRATORY SYSTEM CHARACTERISTICS . . . . .                             | 61 |
| UNIT 3.3: REFERENCES . . . . .   | 62 |
| UNIT 3.4: REPRODUCTIVE SYSTEM CHARACTERISTICS . . . . .                            | 65 |
| UNIT 3.4: REFERENCES . . . . .   | 67 |
| UNIT 3.5: EXCRETORY SYSTEM CHARACTERISTICS . . . . .                               | 73 |
| UNIT 3.5: REFERENCES . . . . .   | 74 |
| UNIT 3.6: SKELETAL SYSTEM CHARACTERISTICS . . . . .                                | 77 |
| UNIT 3.6: REFERENCES . . . . .   | 78 |
| UNIT 3.7: MUSCULAR SYSTEM CHARACTERISTICS . . . . .                                | 81 |
| UNIT 3.7: REFERENCES . . . . .   | 82 |
| UNIT 3.8: NERVOUS SYSTEM CHARACTERISTICS . . . . .                                 | 85 |
| UNIT 3.8: REFERENCES . . . . .   | 86 |
| CLOSING COMMENTS . . . . .   | 89 |
| GLOSSARY OF SYMBOLS USED . . . . .   | 91 |
| GLOSSARY OF CODENS . . . . .   | 93 |
| LIST OF PUBLISHERS . . . . .   | 96 |
| LIST OF WORKSHEETS . . . . .   | 97 |