1. Record Nr. UNINA9910827534403321

Autore Newton Ian

Titolo The migration ecology of birds / / Ian Newton; illustrations by Keith

Brockie

Pubbl/distr/stampa Amsterdam;; London,: Elsevier-Academic Press, c2008

ISBN 1-281-05560-3

9786611055608 0-08-055483-0

Edizione [1st ed.]

Descrizione fisica 1 online resource (985 p.)

Altri autori (Persone) BrockieKeith

Disciplina 598.1568

Soggetti Birds - Migration

Birds - Ecology

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Note generali Description based upon print version of record.

Nota di bibliografia Includes bibliographical references and index.

Nota di contenuto Front Cover; The Migration Ecology of Birds; Copyright Page; Contents;

Preface; Chapter 1 Introduction; TYPES OF BIRD MOVEMENTS; ADAPTATIONS FOR MIGRATION; THE DIVERSITY OF MIGRATION; SEDENTARY POPULATIONS; HIBERNATION; SUMMARY; Chapter 2 Methodology; OBSERVATIONS OF BIRDS ON MIGRATION; RADAR AND OTHER DEVICES; DISTRIBUTION STUDIES; RINGING; RADIO-TRACKING; ISOTOPES AND OTHER MARKERS; CONNECTIVITY; STOPOVER ECOLOGY;

LABORATORY RESEARCH ON PHYSIOLOGY, MIGRATORY RESTLESSNESS

AND DIRECTIONAL PREFERENCES; BREEDING PROGRAMMES; MATHEMATICAL MODELS: CONCLUDING REMARKS; SUMMARY

PART ONE: THE MIGRATORY PROCESS Chapter 3 Migratory flight; BODY WEIGHT, SPEED AND FLIGHT MODE; FLAPPING AND SOARING FLIGHT; THE CONCEPT OF ENERGY HEIGHT; CONCLUSIONS ON THE ROLE OF BODY SIZE IN BIRD MIGRATION; THE NEED FOR REST; MIGRATION BY WALKING OR SWIMMING; CONCLUDING REMARKS; SUMMARY; Chapter 4

Weather effects and other aspects: MIGRATION AND WEATHER:

ALTITUDE OF MIGRATION; DIURNAL AND NOCTURNAL FLIGHT; SOCIAL FACTORS; REVERSE MIGRATION; SUMMARY; Chapter 5 Fueling the flights; ENERGY NEEDS AND BODY COMPOSITION; MIGRATION MODE; MECHANISMS OF FUEL DEPOSITION; DAILY RATES OF WEIGHT GAIN EXAMPLES OF CHANGES IN BODY COMPOSITION FAT CHICKS;

CONCLUDING REMARKS: SUMMARY: APPENDIX 5.1 CALCULATION OF FLIGHT RANGES: Chapter 6 Incredible journeys; SEA-CROSSINGS: DESERT CROSSINGS: HIGH MOUNTAINS: OTHER BARRIERS: CONCLUDING REMARKS; SUMMARY; POSTSCRIPT; Chapter 7 Raptors and other soaring birds; USE OF THERMALS AND OTHER UPDRAFTS; EXTENSION OF MIGRATION AS A CONSEQUENCE OF SOARING; SOCIAL FACTORS; COUNTS IN ISRAEL; NUMBERS ENTERING AFRICA; MIGRATION AT OTHER SITES; ENERGY RESERVES; SUMMARY; Chapter 8 Speed and duration of iournevs: THEORETICAL BASIS: EMPIRICAL ESTIMATES PROPORTION OF MIGRATION SPENT IN FLIGHT APPARENT NON-STOP SEA-CROSSINGS; PENGUINS; MIGRATION WITHIN THE ANNUAL CYCLE; CONCLUDING REMARKS; SUMMARY; Chapter 9 Finding the way; COMPASS ORIENTATION AND BI-COORDINATE NAVIGATION; CUES USED IN DIRECTION FINDING; SOCIAL FACTORS; LOXODROMES AND ORTHODROMES: CONCLUDING REMARKS: SUMMARY: Chapter 10 Vagrancy: PROBABILITY OF ARRIVAL: LONG-DISTANCE DISPERSAL: EFFECT OF POPULATION SIZE; DRIFT BY WIND; OVERSHOOTING; DEVIANT DIRECTIONAL TENDENCIES: MIRROR-IMAGE MIGRATION: REVERSED-DIRECTION MIGRATION; NEW ROUTES AND RANGE **EXPANSION: HUMAN-ASSISTED VAGRANCY** EVIDENCE FROM RINGING CONCLUDING REMARKS; SUMMARY; PART TWO: THE TIMING AND CONTROL OF MIGRATION; Chapter 11 Annual cycles; VARIATIONS IN ANNUAL CYCLES; INTERNAL TIME KEEPING; FLEXIBLE CYCLES; CONCLUDING REMARKS; SUMMARY; Chapter 12 Control mechanisms; OBLIGATE AND FACULTATIVE MODES; MIGRATION TIMING, DISTANCES AND DIRECTIONS; AUTUMN MIGRATION; SPRING MIGRATION; RELATIONSHIP BETWEEN SPRING ARRIVAL, BREEDING AND AUTUMN DEPARTURE; DEFERRED RETURN TO BREEDING AREAS; HORMONAL ISSUES; CONCLUDING REMARKS; SUMMARY; PART THREE: LARGE-SCALE MOVEMENT PATTERNS; Chapter 13 Geographical patterns LATITUDINAL TRENDS

Sommario/riassunto

This book presents an up-to-date, detailed and thorough review of the most fascinating ecological findings of bird migration. It deals with all aspects of this absorbing subject, including the problems of navigation and vagrancy, the timing and physiological control of migration, the factors that limit their populations, and more. Author, Ian Newton, reveals the extraordinary adaptability of birds to the variable and changing conditions across the globe, including current climate change. This adventurous book places emphasis on ecological aspects, which have received only scant attention in pr