Free ebook Habitat structure mediates biodiversity effects on Full PDF

there is increasing evidence that the structure and functioning of ecological communities and ecosystems are strongly influenced by flexible traits of individuals within species a deep understanding of how trait flexibility alters direct and indirect species interactions is crucial for addressing key issues in basic and applied ecology this book provides an integrated perspective on the ecological and evolutionary consequences of interactions mediated by flexible species traits across a wide range of systems it is the first volume synthesizing the rapidly expanding research field of trait mediated indirect effects and highlights how the conceptual framework of these effects can aid the understanding of evolutionary processes population dynamics community structure and stability and ecosystem function it not only brings out the importance of this emerging field for basic ecological questions but also explores the implications of trait mediated interactions for the conservation of biodiversity and the response of ecosystems to anthropogenic environmental changes this book reviews state of the art research into trait based effects and their importance in community and ecosystem ecology the biological composition and richness of most of the earth s major ecosystems are being dramatically and irreversibly transformed by anthropogenic activity yet despite the vast areal extent of our oceans the mainstay of research to date in the biodiversity ecosystem functioning arena has been weighted towards ecological observations and experimentation in terrestrial plant and soil systems this book provides a framework for extending these concepts to a variety of marine systems marine biodiversity and ecosystem functioning is the first book to address the latest advances in biodiversity function science using marine examples it brings together contributions from the leading scientists in the field to provide an in depth evaluation of the science before offering a perspective on future research directions for some of the most pressing environmental issues facing society today and in the future global warming and climate change have become common and trending subjects of interest in recent decades due to their massive influence on biodiversity

AND THE SUBSEQUENT EFFECTS ON SUSTAINABLE USES BY HUMAN BEINGS IN RECENT TIMES VARIOUS ECOSYSTEMS HAVE BEEN SEVERELY INUNDATED WITH ISSUES THAT THREATEN THE VERY SURVIVAL OF THE BIODIVERSITY THAT WE DEPEND ON BIODIVERSITY IS HIGHLY ESSENTIAL AS OUR HEALTH FOOD AND ECONOMY ALL DEPEND ON IT UNFORTUNATELY THE RAPID CHANGE IN THE EARTH S CLIMATIC AND ANTHROPOGENIC STRESSORS ARE AFFECTING ALL FORMS OF LIFE AND NON LIFE ON EARTH MOST SUCH EFFECTS BEING IRREVERSIBLE CLIMATE CHANGE AND ENVIRONMENTAL PERTURBATION IMPACTS ON BIODIVERSITY HIGHLIGHTS TOPICS ASSOCIATED TO THE IMPACTS OF CLIMATE CHANGE AND HUMAN MEDIATED ENVIRONMENTAL DISTURBANCES ON BIODIVERSITY AS WELL AS THE USE OF MICRO ORGANISMS IN COMBATING ENVIRONMENTAL POLLUTION INCLUDING THEIR POTENTIAL AS ANTI BIOFOULING AGENTS THERE IS INCREASING EVIDENCE THAT THE STRUCTURE AND FUNCTIONING OF ECOLOGICAL COMMUNITIES AND ECOSYSTEMS ARE STRONGLY INFLUENCED BY FLEXIBLE TRAITS OF INDIVIDUALS WITHIN SPECIES A DEEP UNDERSTANDING OF HOW TRAIT FLEXIBILITY ALTERS DIRECT AND INDIRECT SPECIES INTERACTIONS IS CRUCIAL FOR ADDRESSING KEY ISSUES IN BASIC AND APPLIED ECOLOGY THIS BOOK PROVIDES AN INTEGRATED PERSPECTIVE ON THE ECOLOGICAL AND EVOLUTIONARY CONSEQUENCES OF INTERACTIONS MEDIATED BY FLEXIBLE SPECIES TRAITS ACROSS A WIDE RANGE OF SYSTEMS IT IS THE FIRST VOLUME SYNTHESIZING THE RAPIDLY EXPANDING RESEARCH FIELD OF TRAIT MEDIATED INDIRECT EFFECTS AND HIGHLIGHTS HOW THE CONCEPTUAL FRAMEWORK OF THESE EFFECTS CAN AID THE UNDERSTANDING OF EVOLUTIONARY PROCESSES POPULATION DYNAMICS COMMUNITY STRUCTURE AND STABILITY AND ECOSYSTEM FUNCTION IT NOT ONLY BRINGS OUT THE IMPORTANCE OF THIS EMERGING FIELD FOR BASIC ECOLOGICAL QUESTIONS BUT ALSO EXPLORES THE IMPLICATIONS OF TRAIT MEDIATED INTERACTIONS FOR THE CONSERVATION OF BIODIVERSITY AND THE RESPONSE OF ECOSYSTEMS TO ANTHROPOGENIC ENVIRONMENTAL CHANGES THIS EDITED WORK SUMMARISES THE LATEST ADVANCES IN THE PHYSIOLOGICAL AND ECOLOGICAL RESPONSES OF MARINE SPECIES TO A WIDE RANGE OF POTENTIAL STRESSORS RESULTING FROM CURRENT ANTHROPOGENIC ACTIVITY IT PROVIDES A PERSPECTIVE ON FUTURE OUTCOMES FOR SOME OF THE MOST PRESSING ENVIRONMENTAL ISSUES FACING SOCIETY TODAY FOOD WEBS EXAMINE THE INTERACTIONS BETWEEN ORGANISMS TO EXPLAIN ECOSYSTEM COMMUNITY STRUCTURE THIS BOOK ARGUES HOW FOOD WEBS ALONE CANNOT DEPICT A TRUE PICTURE OF A COMMUNITY IT SHOWS THAT EXAMINING OTHER INDIRECT INTERACTIONS BETWEEN ORGANISMS CAN HELP US TO BETTER UNDERSTAND THE STRUCTURE AND ORGANISATION OF COMMUNITIES AND ECOSYSTEMS MASTER S THESIS FROM THE YEAR 2023 IN THE SUBJECT BUSINESS ECONOMICS BUSINESS MANAGEMENT CORPORATE GOVERNANCE GRADE 2 7 LEUPHANA UNIVERSIT T L NEBURG LANGUAGE ENGLISH ABSTRACT RECENT EVENTS SUCH AS THE 15TH CONFERENCE OF PARTIES COP15 AND THE

EUROPEAN GREEN DEAL HAVE BROUGHT BIODIVERSITY ISSUES TO THE FOREFRONT OF INTERNATIONAL AND EUROPEAN AGENDAS WITH INCREASING PRESSURE ON COMPANIES TO IMPROVE THEIR DISCLOSURE AND PERFORMANCE RELATED TO BIODIVERSITY WITH GROWING FOCUS ON THE RELATIONSHIP BETWEEN BOARD GENDER DIVERSITY BGD AND ENVIRONMENTAL PERFORMANCE THIS STUDY INVESTIGATES THE EFFECT OF BGD ON BIODIVERSITY DISCLOSURE BD THIS RESEARCH EXPLORES THE RELATIONSHIP BETWEEN BGD AND BD BY ANALYSING A SAMPLE OF 2 793 FIRM YEAR OBSERVATIONS FROM EUROPEAN NON FINANCIAL COMPANIES LISTED ON THE EUROPEAN STOXX600 INDEX FROM 2009 TO 2020 A THREE WAY FIXED EFFECTS ORDERED LOGISTIC REGRESSION MODEL WAS EMPLOYED INCORPORATING LEGITIMACY AND CRITICAL MASS THEORY THE RESULTS DEMONSTRATE A POSITIVE ASSOCIATION BETWEEN BGD AND BD WITH A STRONGER RELATIONSHIP FOR COMPANIES IN EXPLOITATIVE INDUSTRIES HOWEVER THERE WAS NO SUPPORT FOUND FOR THE CRITICAL MASS THEORY AND NO MEDIATING EFFECT OF ENVIRONMENTAL TRAININGS OR PARTNERSHIPS WAS DETECTED THESE FINDINGS HIGHLIGHT THE IMPORTANCE OF GENDER DIVERSITY IN PROMOTING SENSITIVITY TO SOCIETAL AND INSTITUTIONAL CONCERNS AS WELL AS THE NEED FOR INCREASED TRANSPARENCY AND ACCOUNTABILITY IN COMPANIES REPORTING AND ACTIONS RELATED TO BIODIVERSITY THE STUDY S IMPLICATIONS CALL FOR COMPANIES TO TAKE PROACTIVE MEASURES IN PROMOTING DIVERSITY AND SUSTAINABILITY TO MEET GROWING REGULATORY AND STAKEHOLDER DEMANDS EXAMINING THE INTERACTION OF BOTTOM UP AND TOP DOWN FORCES IT PRESENTS A UNIQUE SYNTHESIS OF TROPHIC INTERACTIONS WITHIN AND ACROSS ECOSYSTEMS A LONG OVERDUE COLLATION OF ALL THAT IS KNOWN ABOUT LIFE IN THE TRENCHES AND THE HADAL COMMUNITIES THEREIN BIOGEOCHEMISTRY MAY BE DEFINED AS THE SCIENCE THAT COMBINES BIOLOGICAL AND CHEMICAL PERSPECTIVES FOR THE EXAMINATION OF THE EARTH S SURFACE INCLUDING THE RELATIONS BETWEEN THE BIOSPHERE LITHOSPHERE ATMOSPHERE AND HYDROSPHERE BIOGEOCHEMISTRY IS A COMPARATIVELY RECENTLY DEVELOPED SCIENCE THAT INCORPORATES SCIENTIFIC KNOWLEDGE AND FINDINGS RESEARCH METHODOLOGIES AND MODELS LINKING THE BIOLOGICAL CHEMICAL AND EARTH SCIENCES THEREFORE WHILE IT IS A DEFINITIVE SCIENCE WITH A STRONG THEORETICAL CORE IT IS ALSO DYNAMICALLY AND BROADLY INTERLINKED WITH OTHER SCIENCES THIS BOOK EXAMINES THE COMPLEX SCIENCE OF BIOGEOCHEMISTRY FROM A NOVEL PERSPECTIVE EXAMINING ITS COMPARATIVELY RECENT DEVELOPMENT WHILE ALSO EMPHASIZING ITS INTERLINKED RELATIONSHIP WITH THE EARTH SCIENCES INCLUDING THE COMPLEMENTARY SCIENCE OF GEOCHEMISTRY THE GEOGRAPHICAL SCIENCES BIOGEOGRAPHY OCEANOGRAPHY GEOMATICS EARTH SYSTEMS SCIENCE THE BIOLOGICAL SCIENCES ECOLOGY WILDLIFE STUDIES BIOLOGICAL ASPECTS OF ENVIRONMENTAL SCIENCES AND THE CHEMICAL SCIENCES INCLUDING ENVIRONMENTAL CHEMISTRY AND POLLUTION THE BOOK COVERS CUTTING EDGE TOPICS ON THE SCIENCE OF BIOGEOCHEMISTRY

examining its development structure interdisciplinary multidisciplinary and transdisciplinary relations and the future of the current complex knowledge systems especially in the context of technological developments and the computer and data fields this book provides an integrated analysis of the methodologies and main processes occurring at the entire river basin from upstream until the coast by merging the biological and hydrological processes with the social and economic components thus providing an integrated framework for river basin management integrating the ecohydrology approach with the ecosystem services concept with contributions from an impressive group of argentinean and german oceanographers this book examines classical ecological issues relating to marine ecosystems in the context of climate change it paints a picture of marine ecology at the crossroads of global warming the book examines the fundamentals of marine ecology ecosystem stability wat sediment dynamics in fluvial systems is of great ecological economic and human health related significance worldwide appropriate management strategies are therefore needed to limit maintenance costs as well as minimize potential hazards to the aquatic and adjacent environments human intervention ranging from nutrient pollutant release to physical modifications has a large impact on sediment quantity and quality and thus on river morphology as well as on ecological functioning truly understanding sediment dynamics requires as a consequence a multidisciplinary approach river sedimentation contains the peer reviewed scientific contributions presented at the 13th international symposium on river sedimentation isrs 2016 stuttgart germany 19 22 september 2016 and includes recent accomplishments in theoretical developments numerical modelling experimental laboratory work field investigations and monitoring as well as management methodologies oceanography and marine biology an annual review remains one of the most cited sources in marine science and oceanography the ever increasing interest in work in oceanography and marine biology and its relevance to global environmental issues especially global climate change and its impacts creates a demand for authoritative reviews summarizing the results of recent research this volume covers topics that include resting cysts from coastal marine plankton facilitation cascades in marine ecosystems and the way that human activities are rapidly altering the sensory landscape and behaviour of marine animals for more than 50 years ombar has been an essential reference for research workers and students in all fields of marine science from volume 57 a new international editorial board ensures global relevance with editors from the uk ireland

CANADA AUSTRALIA AND SINGAPORE THE SERIES VOLUMES FIND A PLACE IN THE LIBRARIES OF NOT ONLY MARINE LABORATORIES AND INSTITUTES BUT ALSO UNIVERSITIES PREVIOUS VOLUME IMPACT FACTORS INCLUDE VOLUME 53 4 545 VOLUME 54 7 000 VOLUME 55 5 071 GUIDELINES FOR CONTRIBUTORS INCLUDING INFORMATION ON ILLUSTRATION REQUIREMENTS CAN BE DOWNLOADED ON THE DOWNLOADS UPDATES TAB ON THE VOLUME S CRC PRESS WEBPAGE CHAPTERS 3 4 5 AND 7 OF THIS BOOK ARE FREELY AVAILABLE AS A DOWNLOADABLE OPEN ACCESS PDF UNDER A CREATIVE COMMONS ATTRIBUTION NON COMMERCIAL NO DERIVATIVES 4 0 LICENSE THE LINKS CAN BE FOUND ON THE BOOK S ROUTLEDGE WEB PAGE AT ROUTLEDGE COM 9780367134150 MICROBIAL SYNTROPHY MEDIATED ECO ENTERPRISING SUMMARIZES AND REVIEWS POSSIBLE MICROBIAL APPLICATIONS FOR ECO INDUSTRIAL SUSTAINABILITY THE BOOK EMPHASIZES A WIDE SPECTRUM OF EXPERIMENTAL AND THEORETICAL CONTRIBUTIONS FROM EMINENT RESEARCHERS IN THE FIELD IN 13 CHAPTERS THERE IS A FOCUS ON THE MICROBIAL INTRUSIONS FOR REMEDIATING SITES BY ACCUMULATED PESTICIDES HEAVY METALS POLYAROMATIC HYDROCARBONS AND OTHER INDUSTRIAL EFFLUENTS MOREOVER THE POTENTIALITY AND KEY MECHANISMS USED BY MICROORGANISMS FOR SUSTAINABLE ENVIRONMENTAL MANAGEMENT AND THEIR PROSPECTS ARE ALSO CONSIDERED IN THIS NEW RELEASE THE TERM SYNTROPHY FOR NUTRITIONAL INTERDEPENDENCE IS OFTEN USED IN MICROBIOLOGY TO DESCRIBE THE SYMBIOTIC RELATIONSHIP BETWEEN BACTERIAL SPECIES UNDERSTANDING SUCH INTERACTIONS CAN BE OF CONSIDERABLE INTEREST WHEN WE COME TO MANIPULATE MICROBES TO OUR OWN BENEFIT SUCH AS BY DISRUPTING PATHOGENIC COMMUNITIES WITH ANTIBIOTICS OR BY PROMOTING EFFICIENCY IN COMMUNITIES THAT PRODUCE ENERGY OR BREAK DOWN WASTE SUMMARIZES AND REVIEWS POSSIBLE MICROBIAL APPLICATIONS FOR ECO INDUSTRIAL SUSTAINABILITY INCLUDES A WIDE SPECTRUM OF EXPERIMENTAL AND THEORETICAL CONTRIBUTIONS FROM EMINENT RESEARCHERS IN THE FIELD FOCUSES ON MICROBIAL INTRUSIONS FOR REMEDIATING SITES AND OTHER INDUSTRIAL EFFLUENTS A COMPACT OVERVIEW OF THE PROCESS THEORY AND PRACTICE OF CONSERVATION AND ITS CENTRAL PLACE IN ENVIRONMENTAL ISSUES THERE IS INCREASING EVIDENCE THAT THE STRUCTURE AND FUNCTIONING OF ECOLOGICAL COMMUNITIES AND ECOSYSTEMS ARE STRONGLY INFLUENCED BY FLEXIBLE TRAITS OF INDIVIDUALS WITHIN SPECIES A DEEP UNDERSTANDING OF HOW TRAIT FLEXIBILITY ALTERS DIRECT AND INDIRECT SPECIES INTERACTIONS IS CRUCIAL FOR ADDRESSING KEY ISSUES IN BASIC AND APPLIED ECOLOGY THIS BOOK PROVIDES AN INTEGRATED PERSPECTIVE ON THE ECOLOGICAL AND EVOLUTIONARY CONSEQUENCES OF INTERACTIONS MEDIATED BY FLEXIBLE SPECIES TRAITS ACROSS A WIDE RANGE OF SYSTEMS IT IS THE FIRST VOLUME SYNTHESIZING THE RAPIDLY EXPANDING RESEARCH FIELD OF TRAIT MEDIATED INDIRECT EFFECTS AND HIGHLIGHTS HOW THE CONCEPTUAL FRAMEWORK OF THESE EFFECTS CAN AID THE UNDERSTANDING OF EVOLUTIONARY PROCESSES POPULATION

DYNAMICS COMMUNITY STRUCTURE AND STABILITY AND ECOSYSTEM FUNCTION IT NOT ONLY BRINGS OUT THE IMPORTANCE OF THIS EMERGING FIELD FOR BASIC ECOLOGICAL QUESTIONS BUT ALSO EXPLORES THE IMPLICATIONS OF TRAIT MEDIATED INTERACTIONS FOR THE CONSERVATION OF BIODIVERSITY AND THE RESPONSE OF ECOSYSTEMS TO ANTHROPOGENIC ENVIRONMENTAL CHANGES PUBLISHER DESCRIPTION BIODIVERSITY IS THE VARIETY OF ALL THE GENES SPECIES AND ECOSYSTEMS WHICH ARE FOUND ON OUR PLANET IT PROVIDES HUMANITY WITH THE CORNUCOPIA OF GOODS AND SERVICES FROM FOOD ENERGY AND MATERIALS TO THE GENES WHICH PROTECT OUR CROPS AND CURE OUR DISEASES THE LOSS OF THE EARTH S BIOLOGICAL DIVERSITY IS ONE OF THE MOST PRESSING ENVIRONMENTAL AND DEVELOPMENT ISSUES SUSTAINABILITY HIGHLIGHTS THE IDEA THAT THE CURRENT USE OF NATURAL RESOURCES SHOULD NOT DIMINISH THE OPTIONS OF FUTURE GENERATIONS AND MAINTAINING BIODIVERSITY IS CLEARLY ONE OF THE REQUIREMENTS FOR MEETING THIS GOAL BIODIVERSITY CONSERVATION ADDRESSES THE REMARKABLE GROWTH IN CONCERN AT ALL LEVELS FOR LIVING THINGS AND THE ENVIRONMENT AND INCREASED APPRECIATION OF THE LINKS BETWEEN THE STATE OF ECOSYSTEMS AND THE STATE OF HUMANKIND BUILDING ON A WEALTH OF RESEARCH AND ANALYSIS BY THE CONSERVATION COMMUNITY WORLDWIDE THIS BOOK PROVIDES A COMPREHENSIVE AND ACCESSIBLE VIEW OF KEY GLOBAL ISSUES IN BIODIVERSITY IT OUTLINES SOME OF THE BROAD ECOLOGICAL RELATIONSHIPS BETWEEN HUMANS AND THE REST OF THE MATERIAL WORLD AND SUMMARIES INFORMATION ON THE HEALTH OF THE PLANET BIODIVERSITY IS BENEFICIAL TO THE LOCAL ENVIRONMENT AND CAN ALSO BE A NATURAL FORM OF CROP PROTECTION IN CONVENTIONAL AGRICULTURE BIODIVERSITY IS OFTEN ELIMINATED BY PLANTING LARGE TRACTS OF FIELDS WITH A SINGLE CROP AND KILLING OTHER SPECIES WITH HERBICIDES INSECTICIDES PESTICIDES AND FUNGICIDES IN THE ABSENCE OF BIODIVERSITY THE ARRIVAL OF A SINGLE SPECIES CAN SIGNIFICANTLY AFFECT CROP PRODUCTION AND CONVENTIONAL FARMERS COUNTER THIS WITH CHEMICAL KILLING AGENTS THAT DAMAGE THE ENVIRONMENTAL HEALTH OF THE AREA CONSERVATION IS THE PROTECTION PRESERVATION MANAGEMENT OR RESTORATION OF WILDLIFE AND NATURAL RESOURCES SUCH AS FORESTS AND WATER THROUGH THE CONSERVATION OF BIODIVERSITY AND THE SURVIVAL OF MANY SPECIES AND HABITATS WHICH ARE THREATENED DUE TO HUMAN ACTIVITIES CAN BE ENSURED THERE IS AN URGENT NEED NOT ONLY TO MANAGE AND CONSERVE THE BIOTIC WEALTH BUT ALSO RESTORE THE DEGRADED ECOSYSTEMS THIS BOOK WILL DEFINITELY SERVE AS AN EXCELLENT REFERENCE MATERIAL AND PRACTICAL GUIDE FOR TEACHERS RESEARCH WORKERS STUDENTS AND ENVIRONMENTALISTS UNDERSTANDING HOW BIOLOGICAL DIVERSITY AFFECTS ECOSYSTEM FUNCTIONING IS A KEY QUESTION IN MODERN ECOLOGY THIS IS OF PARTICULAR IMPORTANCE IN THE GENERAL CONTEXT OF RECENT GLOBAL CHANGES CAUSED BY HUMAN ACTIVITIES SUCH AS WATER ABSTRACTION FLOW REGULATION

SHIFTS IN AGRICULTURAL PRACTICES CONTAMINATION CLIMATE CHANGES AND BIOLOGICAL INVASIONS THESE CHANGES ARE AFFECTING BIODIVERSITY ECOSYSTEM FUNCTIONING AND THEIR COMPLEX INTERACTIONS SIMULTANEOUSLY HOWEVER OUR ABILITY TO UNDERSTAND HOW GENES INDIVIDUALS POPULATIONS COMMUNITIES AND ECOSYSTEMS MAY RESPOND TO SUCH CHANGES IS LIMITED DESPITE ECOLOGISTS FREQUENTLY BEING REQUESTED TO PROVIDE POLICYMAKERS AND MANAGERS WITH PREDICTIONS INDEED THE SPECIES THAT COMPOSED BIODIVERSITY CAN ESTABLISH COMPLEX TROPHIC LINKS BETWEEN THEM IN THE ECOSYSTEMS THIS STRUCTURE OF FOOD WEBS IS UNDER THE PERMANENT CONSTRAINT OF COMMUNITY DYNAMICS WHICH CONNECTS SPECIES POPULATIONS COMMUNITIES AND ECOSYSTEMS THEREFORE THE RESPONSE OF FOOD WEBS TO PERTURBATIONS CAN HELP ECOLOGISTS TO BETTER UNDERSTAND THE RELATIONSHIP BETWEEN BIOLOGICAL DIVERSITY AND ECOSYSTEM FUNCTIONING MICROBE MEDIATED REMEDIATION OF ENVIRONMENTAL CONTAMINANTS PRESENTS RECENT SCIENTIFIC PROGRESS IN APPLYING MICROBES FOR ENVIRONMENTAL MANAGEMENT THE BOOK EXPLORES THE CURRENT EXISTING PRACTICAL APPLICATIONS AND PROVIDES INFORMATION TO HELP READERS DEVELOP NEW PRACTICES AND APPLICATIONS EDITED BY RECOGNIZED LEADERS IN THE FIELD THIS PENETRATING ASSESSMENT OF OUR PROGRESS TO DATE IN DEPLOYING MICROORGANISMS TO THE ADVANTAGE OF ENVIRONMENTAL MANAGEMENT AND BIOTECHNOLOGY WILL BE WIDELY WELCOMED BY THOSE WORKING IN SOIL CONTAMINATION MANAGEMENT AGRICULTURE ENVIRONMENT MANAGEMENT SOIL MICROBIOLOGY AND WASTE MANAGEMENT THE POLLUTING EFFECTS ON THE WORLD AROUND US OF SOIL EROSION THE UNWANTED MIGRATION OF SEDIMENTS CHEMICAL FERTILIZERS AND PESTICIDES AND THE IMPROPER TREATMENT OF HUMAN AND ANIMAL WASTES HAVE RESULTED IN SERIOUS ENVIRONMENTAL AND SOCIAL PROBLEMS AROUND THE WORLD PROBLEMS WHICH REQUIRE US TO LOOK FOR SOLUTIONS ELSEWHERE THAN ESTABLISHED PHYSICAL AND CHEMICAL TECHNOLOGIES OFTEN THE ANSWER LIES IN HYBRID APPLICATIONS IN WHICH MICROBIAL METHODS ARE COMBINED WITH PHYSICAL AND CHEMICAL ONES WHEN WE REMEMBER THAT THESE HIGHLY EFFECTIVE MICROORGANISMS CULTURED FOR A VARIETY OF APPLICATIONS ARE BUT A TINY FRACTION OF THOSE TO BE FOUND IN THE WORLD AROUND US WE REALIZE THE VASTNESS OF THE UNTAPPED AND BENEFICIAL POTENTIAL OF MICROORGANISMS EXPLORES MICROBIAL APPLICATION REDRESSING FOR SOIL AND WATER CONTAMINATION CHALLENGES INCLUDES INFORMATION ON MICROBIAL SYNTHESIZED NANOMATERIALS FOR REMEDIATION OF CONTAMINATED SOILS PRESENTS A UNIQUELY HYBRID APPROACH COMBINING MICROBIAL INTERACTIONS WITH OTHER CHEMICAL AND PHYSICAL METHODS THIS BOOK ASSESSES RIVER HEALTH IN THE LANCANG RIVER BASIN WITH REGARD TO THE IMPACTS OF HYDROPOWER PROJECTS IT STUDIES KEY COMPONENTS OF THE TRANSBOUNDARY EFFECTS OF CHINESE DAMS ON THE LANCANG RIVER INCLUDING ITS HYDROLOGY SEDIMENT TRANSPORT WATER TEMPERATURE AND FISH

COMMUNITY IT ALSO INVESTIGATES THE SPECIFIC IMPACTS OF HYDROPOWER ON WOMEN S LIVES AND LIVELIHOODS AND FACTORS THAT INFLUENCE WOMEN S PARTICIPATION IN RIVER HEALTH MANAGEMENT IN CLOSING THE LESSONS LEARNED REGARDING ENVIRONMENTAL PROTECTION AND HYDROPOWER DEVELOPMENT IN THE LANCANG RIVER BASIN ARE SHARED E G WITH HYDROPOWER DEVELOPERS AND REGULATORS IN LAOS DEVELOPMENT IS A COMPLEX AND HIGHLY DYNAMIC PROCESS INVOLVING THE CROSS TALK AMONG GENES MATERNAL EFFECTS AND ENVIRONMENTAL CIRCUMSTANCES WIDESPREAD EVIDENCE FROM PLANT TO ANIMAL SPECIES SHOW THAT VARIATION IN DEVELOPMENTAL CONDITIONS CAN MODULATE LIFE HISTORY TRAJECTORIES AND INFLUENCE KEY TRAITS SUCH AS GROWTH REPRODUCTION AND SENESCENCE THESE EFFECTS ARE NOT LIMITED TO A SINGLE GENERATION BUT CAN ALSO BE PASSED ON FUTURE GENERATIONS THIS BOOK AIMS TO BRING TOGETHER STUDIES OF EARLY LIFE EFFECTS FROM THE FIELDS OF EVOLUTIONARY BIOLOGY GLOBAL CHANGE BIOLOGY AND BIOMEDICINE TO SYNTHESISE AND IMPROVE CURRENT KNOWLEDGE OF THE MECHANISMS INVOLVED AND HOW VARIATION IN EARLY LIFE CONDITIONS TRANSLATES INTO DARWINIAN FITNESS OUTCOMES RELYING ON EXAMPLES OF ORGANISMS RESPONSES TO THE ONGOING AND FUTURE ENVIRONMENTAL CHALLENGES OF THE ANTHROPOCENE THIS BOOK TAKES A NOVEL APPROACH TO ADDRESS THE ADAPTIVE MEANING OF EARLY LIFE EFFECTS THE BOOK HAS A BROAD SCIENTIFIC APPROACH TARGETING ECO EVOLUTIONARY BIOLOGISTS BEHAVIOURAL BIOLOGISTS ECO PHYSIOLOGISTS ECO TOXICOLOGISTS AS WELL AS EPIDEMIOLOGISTS AND BIOMEDICAL SCIENTISTS TODAY 20 PERCENT OF THE GLOBAL FOOD SUPPLY RELIES ON URBAN AGRICULTURE SOCIAL ECOLOGICAL SYSTEMS SHAPED BY BOTH HUMAN AND NON HUMAN INTERACTIONS THIS BOOK SHOWS HOW URBAN AGROECOLOGISTS MEASURE FLORA AND FAUNA THAT UNDERPIN THE ECOLOGICAL DYNAMICS OF THESE SYSTEMS AND HOW PEOPLE MANAGE AND BENEFIT FROM THESE SYSTEMS IT EXPLAINS HOW THE SOCIOPOLITICAL LANDSCAPE IN WHICH THESE SYSTEMS ARE EMBEDDED CAN IN TURN SHAPE THE SOCIAL ECOLOGICAL POLITICAL AND ECONOMIC DYNAMICS WITHIN THEM SYNTHESIZING INTERDISCIPLINARY APPROACHES IN URBAN AGROECOLOGY IN THE NATURAL AND SOCIAL SCIENCES THE BOOK EXPLORES METHODOLOGIES AND NEW DIRECTIONS IN RESEARCH THAT CAN BE ADOPTED BY SCHOLARS AND PRACTITIONERS ALIKE WITH CONTRIBUTIONS FROM RESEARCHERS UTILIZING BOTH SOCIAL AND NATURAL SCIENCE APPROACHES URBAN AGROECOLOGY DESCRIBES THE CURRENT SOCIAL ENVIRONMENTAL UNDERSTANDINGS OF THE SCIENCE THE MOVEMENT AND THE PRACTICES IN URBAN AGROECOLOGY BY INVESTIGATING THE ROLE OF AGROECOLOGY IN CITIES THE BOOK CALLS FOR THE CREATION OF SPACES FOR FOOD TO BE SUSTAINABLY GROWN IN URBAN SPACES AN URBAN AGRICULTURE UA MOVEMENT ESSENTIAL READING FOR GRADUATE STUDENTS PRACTITIONERS POLICY MAKERS AND RESEARCHERS THIS BOOK CHARTS THE COURSE FOR ACCELERATING THIS MOVEMENT IN THE PAST TWO DECADES AN INCREASING NUMBER OF ECOLOGISTS HAVE

STARTED TO INVESTIGATE THE IMPORTANCE OF BIODIVERSITY FOR ECOLOGICAL PROCESSES SUCH AS ENERGY FLOW AND NUTRIENT CYCLING OFTEN REFERRED TO AS ECOSYSTEM FUNCTIONING INSECTS ARE A DOMINANT COMPONENT OF BIODIVERSITY IN TERRESTRIAL ECOSYSTEMS AND PLAY A KEY ROLE IN MEDIATING THE RELATIONSHIP BETWEEN PLANTS AND ECOSYSTEM PROCESSES THIS VOLUME IS THE FIRST TO SUMMARIZE THEIR EFFECTS ON ECOSYSTEM FUNCTIONING FOCUSING MAINLY BUT NOT EXCLUSIVELY ON HERBIVOROUS INSECTS RENOWNED AUTHORS WITH EXTENSIVE EXPERIENCE IN THE FIELD OF PLANT INSECT INTERACTIONS CONTRIBUTE TO THE VOLUME USING EXAMPLES FROM THEIR OWN WORK IN ADDITION TO PROVIDING CONCISE REVIEWS OF THE FIELD THIS VOLUME DISCUSSES IN DETAIL THE ADVANTAGES AND DISADVANTAGES OF VARIOUS TECHNIQUES OF MANIPULATING INSECT HERBIVORY THUS THE TEXT PROVIDES BOTH A THEORETICAL BASIS AS WELL AS PRACTICAL ADVICE FOR FUTURE MANIPULATIVE STUDIES OF BIODIVERSITY ECOSYSTEM FUNCTIONING A CRITICAL SYNTHESIS OF KEY CONCEPTS FOR UNDERSTANDING HUMAN IMPACTS ON MARINE ECOSYSTEMS AND FOR DECISION MAKING BASED ON ECOSYSTEM SERVICES ECOLOGY AND BIODIVERSITY OF BENTHOS PROVIDES INSIGHTS INTO THE CHARACTERISTIC FEATURES OF MARINE AND ESTUARINE BENTHOS THAT PLAY AN IMPORTANT ROLE IN COASTAL ECOSYSTEM FUNCTIONING A PRIMARY LEVEL IN THE FOOD CHAIN THE BOOK PROVIDES THE LATEST INFORMATION ON MULTIDISCIPLINARY REFLECTIONS BY VARIOUS RESEARCHERS STUDYING THE BENTHIC COMMUNITY THROUGH THE CHAPTERS ECOSYSTEM SERVICES ARE EXPLORED AS A WAY TO SHARE APPROACHES AND SCIENTIFIC METHODS TO ACHIEVE KNOWLEDGE BASED SUSTAINABLE PLANNING AND MANAGEMENT OF BENTHIC ECOSYSTEMS THIS IS A HELPFUL GUIDE FOR ANYONE WORKING ON MARINE AND ESTUARINE ENVIRONMENTS AND FOR THOSE WHO NEED AN INTRODUCTION TO BENTHIC ECOLOGY THE BOOK HAS A WIDE RANGE OF SCIENTIFIC COVERAGE SINCE IT CATERS PRIMARILY TO THE REQUIREMENT OF MARINE ECOLOGISTS MARINE BENTHOLOGISTS EIA EXPERTS AQUATIC RESEARCHERS SCIENTISTS TEACHERS AND RESEARCH SCHOLARS IN ADDITION TO THIS IT ALSO SERVES AS A REFERENCE FOR POSTGRADUATE UNDERGRADUATE STUDENTS STUDYING AQUATIC ECOSYSTEMS INCLUDES ANALYTICAL METHODS AND DETAILED STATISTICAL INTERPRETATION FOR QUALITATIVE AND QUANTITATIVE ANALYSES OF MARINE AND ESTUARINE BENTHIC COMMUNITY STRUCTURES PRESENTS FIGURES SCHEMATIC DIAGRAMS AND PHOTOGRAPHS RELATED TO BENTHIC DIVERSITY OF COASTAL ECOSYSTEM TO AID IN UNDERSTANDING PROTOCOLS FOR THE ASSESSMENT OF THE BENTHIC COMMUNITY S STRUCTURE AND FUNCTION INCLUDES CASE STUDIES THROUGHOUT EACH CHAPTER TO INCREASE UNDERSTANDING OF BENTHIC COMMUNITIES IN THE PAST TWO DECADES AN INCREASING NUMBER OF ECOLOGISTS HAVE STARTED TO INVESTIGATE THE IMPORTANCE OF BIODIVERSITY FOR ECOLOGICAL PROCESSES SUCH AS ENERGY FLOW AND NUTRIENT CYCLING OFTEN REFERRED TO AS ECOSYSTEM FUNCTIONING INSECTS ARE A DOMINANT

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ECOSYSTEM SERVICES AND HUMAN WELL BEING IN AN AGE OF ACCELERATING BIODIVERSITY LOSS THIS TIMELY AND CRITICAL VOLUME SUMMARIZES RECENT ADVANCES IN BIODIVERSITY ECOSYSTEM FUNCTIONING RESEARCH AND EXPLORES THE ECONOMICS OF BIODIVERSITY AND ECOSYSTEM SERVICES THE BOOK STARTS BY SUMMARIZING THE DEVELOPMENT OF THE BASIC SCIENCE AND PROVIDES A META ANALYSIS THAT QUANTITATIVELY TESTS SEVERAL BIODIVERSITY AND ECOSYSTEM FUNCTIONING HYPOTHESES IT THEN DESCRIBES THE NATURAL SCIENCE FOUNDATIONS OF BIODIVERSITY AND ECOSYSTEM FUNCTIONING RESEARCH INCLUDING QUANTIFYING FUNCTIONAL DIVERSITY THE DEVELOPMENT OF THE FIELD INTO A PREDICTIVE SCIENCE THE EFFECTS OF STABILITY AND COMPLEXITY METHODS TO QUANTIFY MECHANISMS BY WHICH DIVERSITY AFFECTS FUNCTIONING THE IMPORTANCE OF TROPHIC STRUCTURE MICROBIAL ECOLOGY AND SPATIAL DYNAMICS FINALLY THE BOOK TAKES RESEARCH ON BIODIVERSITY AND ECOSYSTEM FUNCTIONING FURTHER THAN IT HAS EVER GONE INTO THE HUMAN DIMENSION DESCRIBING THE MOST PRESSING ENVIRONMENTAL CHALLENGES THAT FACE HUMANITY AND THE EFFECTS OF DIVERSITY ON CLIMATE CHANGE MITIGATION RESTORATION OF DEGRADED HABITATS MANAGED ECOSYSTEMS POLLINATION DISEASE AND BIOLOGICAL INVASIONS HOWEVER WHAT MAKES THIS VOLUME TRULY UNIQUE ARE THE CHAPTERS THAT CONSIDER THE ECONOMIC PERSPECTIVE THESE INCLUDE A SYNTHESIS OF THE ECONOMICS OF ECOSYSTEM SERVICES AND BIODIVERSITY AND THE OPTIONS OPEN TO POLICY MAKERS TO ADDRESS THE FAILURE OF MARKETS TO ACCOUNT FOR THE LOSS OF ECOSYSTEM SERVICES AN EXAMINATION OF THE CHALLENGES OF VALUING ECOSYSTEM SERVICES AND HENCE TO UNDERSTANDING THE HUMAN CONSEQUENCES OF DECISIONS THAT NEGLECT THESE SERVICES AND AN EXAMINATION OF THE WAYS IN WHICH ECONOMISTS ARE CURRENTLY INCORPORATING BIODIVERSITY AND ECOSYSTEM FUNCTIONING RESEARCH INTO DECISION MODELS FOR THE CONSERVATION AND MANAGEMENT OF BIODIVERSITY A FINAL SECTION DESCRIBES NEW ADVANCES IN ECOINFORMATICS THAT WILL HELP TRANSFORM THIS FIELD INTO A GLOBALLY PREDICTIVE SCIENCE AND SUMMARIZES THE ADVANCEMENTS AND FUTURE DIRECTIONS OF THE FIELD THE ULTIMATE CONCLUSION IS THAT BIODIVERSITY IS AN ESSENTIAL ELEMENT OF ANY STRATEGY FOR SUSTAINABLE DEVELOPMENT BASED ON PRINCIPLES OF THE CONSERVATION AND OPTIMIZATION OF BIODIVERSITY AND OF EQUITY AND SUSTAINABILITY THIS BOOK FOCUSES ON THE ECOLOGY OF THE COFFEE AGROECOSYSTEM AS A MODEL FOR A SUSTAINABLE AGRICULTURAL ECOSYSTEM IT DRAWS ON THE AUTHORS OWN RESEARCH CONDUCTED OVER THE LAST TWENTY YEARS AS WELL AS INCORPORATING THE VAST LITERATURE THAT HAS BEEN GENERATED ON COFFEE AGROECOSYSTEMS FROM AROUND THE WORLD THE BOOK USES AN INTEGRATED APPROACH THAT WEAVES TOGETHER VARIOUS LINES OF RESEARCH TO UNDERSTAND THE ECOLOGY OF A VERY DIVERSE TROPICAL AGROFORESTRY SYSTEM KEY CONCEPTS EXPLORED INCLUDE BIODIVERSITY PATTERNS METAPOPULATION DYNAMICS AND

ECOLOGICAL NETWORKS THESE ARE ALL SET IN A SOCIOECONOMIC AND POLITICAL FRAMEWORK WHICH RELATES THEM TO THE REALITIES OF FARMERS LIVELIHOODS THE AUTHORS PROVIDE A NOVEL SYNTHESIS THAT WILL GENERATE NEW UNDERSTANDING AND CAN BE APPLIED TO OTHER EXAMPLES OF SUSTAINABLE AGRICULTURE AND FOOD PRODUCTION THIS SYNTHESIS ALSO EXPLAINS THE ECOSYSTEM SERVICES PROVIDED BY THE APPROACH INCLUDING THE ECONOMIC FAIR TRADE AND POLITICAL ASPECTS SURROUNDING THIS ALL IMPORTANT GLOBAL COMMODITY THE 7 VOLUME ENCYCLOPEDIA OF BIODIVERSITY SECOND EDITION MAINTAINS THE REPUTATION OF THE HIGHLY REGARDED ORIGINAL PRESENTING THE MOST CURRENT INFORMATION AVAILABLE IN THIS GLOBALLY CRUCIAL AREA OF RESEARCH AND STUDY IT BRINGS TOGETHER THE DIMENSIONS OF BIODIVERSITY AND EXAMINES BOTH THE SERVICES IT PROVIDES AND THE MEASURES TO PROTECT IT MAJOR THEMES OF THE WORK INCLUDE THE EVOLUTION OF BIODIVERSITY SYSTEMS FOR CLASSIFYING AND DEFINING BIODIVERSITY ECOLOGICAL PATTERNS AND THEORIES OF BIODIVERSITY AND AN ASSESSMENT OF CONTEMPORARY PATTERNS AND TRENDS IN BIODIVERSITY THE SCIENCE OF BIODIVERSITY HAS BECOME THE SCIENCE OF OUR FUTURE IT IS AN INTERDISCIPLINARY FIELD SPANNING AREAS OF BOTH PHYSICAL AND LIFE SCIENCES OUR AWARENESS OF THE LOSS OF BIODIVERSITY HAS BROUGHT A LONG OVERDUE APPRECIATION OF THE MAGNITUDE OF THIS LOSS AND A DETERMINATION TO DEVELOP THE TOOLS TO PROTECT OUR FUTURE SECOND EDITION INCLUDES OVER 100 NEW ARTICLES AND 226 UPDATED ARTICLES COVERING THIS MULTIDISCIPLINARY FIELD FROM EVOLUTION TO HABITS TO ECONOMICS IN 7 VOLUMES THE EDITORS OF THIS EDITION ARE ALL WELL RESPECTED INSTANTLY RECOGNIZABLE ACADEMICS OPERATING AT THE TOP OF THEIR RESPECTIVE FIELDS IN BIODIVERSITY RESEARCH READERS CAN BE ASSURED THAT THEY ARE READING MATERIAL THAT HAS BEEN METICULOUSLY CHECKED AND REVIEWED BY EXPERTS APPROXIMATELY 1 800 FIGURES AND 350 TABLES COMPLEMENT THE TEXT AND MORE THAN 3 000 GLOSSARY ENTRIES EXPLAIN KEY TERMS FRED VAN DYKE S NEW TEXTBOOK CONSERVATION BIOLOGY FOUNDATIONS CONCEPTS APPLICATIONS 2ND EDITION REPRESENTS A MAJOR NEW TEXT FOR ANYONE INTERESTED IN CONSERVATION DRAWING ON HIS VAST EXPERIENCE VAN DYKE S ORGANIZATIONAL CLARITY AND READABLE STYLE MAKE THIS BOOK AN INVALUABLE RESOURCE FOR STUDENTS IN CONSERVATION AROUND THE GLOBE PRESENTING KEY INFORMATION AND WELL SELECTED EXAMPLES THIS STUDENT FRIENDLY VOLUME CAREFULLY INTEGRATES THE SCIENCE OF CONSERVATION BIOLOGY WITH ITS IMPLICATIONS FOR ETHICS LAW POLICY AND ECONOMICS HERBIVORES INFLUENCE AND OFTEN REGULATE ENERGY FLOW I INVESTIGATED INTERACTIONS BETWEEN HERBIVORY AND THE FOODS ON WHICH GEESE RELY WHILE NESTING AND REARING THEIR BROODS ON THE YUKON KUSKOKWIM DELTA IN SOUTHWESTERN ALASKA IN A CAPTIVE CACKLING CANADA GOSLING BRANTA CANADENSIS MINIMA EXPERIMENT I DECOUPLED THE EFFECTS OF SEASONAL DECLINES IN FORAGE

QUALITY AND AVAILABILITY ON GOSLING DEVELOPMENT AN 11 DECLINE IN FORAGE QUALITY TRANSLATED TO GOSLINGS THAT WERE STRUCTURALLY SMALLER AND 100 G LIGHTER AT 31 DAYS OF AGE FORAGE AVAILABILITY HAD SIMILAR EFFECTS ON GOSLING SIZE AND THE COMBINED MAGNITUDE OF THESE EFFECTS ARE SIMILAR TO THOSE OBSERVED IN WILD POPULATIONS I MANIPULATED WITHIN SEASON GRAZING HISTORY OF CAREX SUBSPATHACEA SWARDS WITHIN BROOD REARING AREAS USED BY BLACK BRANT GEESE BRANTA BERNICLA NIGRICANS SPATIAL VARIATION IN FORAGE QUALITY AND AVAILABILITY EXCEEDED SEASONAL VARIATION BRANT CONSUMED OVER 95 OF THE ANNUAL ABOVEGROUND PRODUCTION OF THESE SWARDS WITHOUT ANY SHORT OR APPARENT LONG TERM EFFECTS ON ABOVEGROUND GROWTH ADDING GRAZING PRESSURE TO C RAMENSKII OR REMOVING GRAZING PRESSURE FROM C SUBSPATHACEA RESULTED IN A BI DIRECTIONAL SHIFT IN THE MORPHOLOGY AND NUTRITIONAL CHARACTERISTICS OF THESE SEDGES THE AREAL EXTENT OF C SUBSPATHACEA INCREASED 2 TO 8 OF THE TUTAKOKE LANDSCAPE WITH A CONCOMITANT DECREASE IN C RAMENSKII MEADOWS BETWEEN 1991 1998 BRANT HAVE BEEN INCREASING THE CARRYING CAPACITY OF THE TUTAKOKE RIVER COLONY FOLLOWING A POPULATION DECLINE IN THE EARLY 1980 S THE POPULATION HAS INCREASED BEGINNING IN 1988 YET REMAINS BELOW HISTORIC NUMBERS DENSITY DEPENDENT EFFECTS ON GOSLING GROWTH ACCOMPANIED THE POPULATION INCREASE INITIALLY HOWEVER GOSLING MASS HAS INCREASED OVER THE PAST DECADE DUE TO HERBIVORE MEDIATED INCREASES IN THE AREAL EXTENT OF GRAZING LAWNS LEAVES III IV

Trait-Mediated Indirect Interactions

2012-12-06

There is increasing evidence that the structure and functioning of ecological communities and ecosystems are strongly influenced by flexible traits of individuals within species A deep understanding of how trait flexibility alters direct and indirect species interactions is crucial for addressing key issues in basic and applied ecology This book provides an integrated perspective on the ecological and evolutionary consequences of interactions mediated by flexible species traits across a wide range of systems It is the first volume synthesizing the rapidly expanding research field of trait mediated indirect effects and highlights how the conceptual framework of these effects can aid the understanding of evolutionary processes population dynamics community structure and stability and ecosystem function It not only brings out the importance of this emerging field for basic ecological questions but also explores the implications of trait mediated interactions for the conservation of biodiversity and the response of ecosystems to anthropogenic environmental changes

Trait-Mediated Indirect Interactions

2012-12-06

This book reviews state of the art research into trait based effects and their importance in community and ecosystem ecology

Marine Biodiversity and Ecosystem Functioning

2012-07-19

THE BIOLOGICAL COMPOSITION AND RICHNESS OF MOST OF THE EARTH S MAJOR ECOSYSTEMS ARE BEING DRAMATICALLY AND IRREVERSIBLY TRANSFORMED BY ANTHROPOGENIC ACTIVITY YET DESPITE THE VAST AREAL EXTENT OF OUR OCEANS THE MAINSTAY OF RESEARCH TO DATE IN THE BIODIVERSITY ECOSYSTEM FUNCTIONING ARENA HAS BEEN WEIGHTED TOWARDS ECOLOGICAL OBSERVATIONS AND EXPERIMENTATION IN TERRESTRIAL PLANT AND SOIL SYSTEMS THIS BOOK PROVIDES A FRAMEWORK FOR EXTENDING THESE CONCEPTS TO A VARIETY OF MARINE SYSTEMS MARINE BIODIVERSITY AND ECOSYSTEM FUNCTIONING IS THE FIRST BOOK TO ADDRESS THE LATEST ADVANCES IN BIODIVERSITY FUNCTION SCIENCE USING MARINE EXAMPLES IT BRINGS TOGETHER CONTRIBUTIONS FROM THE LEADING SCIENTISTS IN THE FIELD TO PROVIDE AN IN DEPTH EVALUATION OF THE SCIENCE BEFORE OFFERING A PERSPECTIVE ON FUTURE RESEARCH DIRECTIONS FOR SOME OF THE MOST PRESSING ENVIRONMENTAL ISSUES FACING SOCIETY TODAY AND IN THE FUTURE

Climate Change and Environmental Perturbations

2024

GLOBAL WARMING AND CLIMATE CHANGE HAVE BECOME COMMON AND TRENDING SUBJECTS OF INTEREST IN RECENT DECADES DUE TO THEIR MASSIVE INFLUENCE ON BIODIVERSITY AND THE SUBSEQUENT EFFECTS ON SUSTAINABLE USES BY HUMAN BEINGS IN RECENT TIMES VARIOUS ECOSYSTEMS HAVE BEEN SEVERELY INUNDATED WITH ISSUES THAT THREATEN THE VERY SURVIVAL OF THE BIODIVERSITY THAT WE DEPEND ON BIODIVERSITY IS HIGHLY ESSENTIAL AS OUR HEALTH FOOD AND ECONOMY ALL DEPEND ON IT UNFORTUNATELY THE RAPID CHANGE IN THE EARTH S CLIMATIC AND ANTHROPOGENIC STRESSORS ARE AFFECTING ALL FORMS OF LIFE AND NON LIFE ON EARTH MOST SUCH EFFECTS BEING IRREVERSIBLE CLIMATE CHANGE AND ENVIRONMENTAL PERTURBATION IMPACTS ON BIODIVERSITY HIGHLIGHTS TOPICS ASSOCIATED TO THE IMPACTS OF CLIMATE CHANGE AND HUMAN MEDIATED

ENVIRONMENTAL DISTURBANCES ON BIODIVERSITY AS WELL AS THE USE OF MICRO ORGANISMS IN COMBATING ENVIRONMENTAL POLLUTION INCLUDING THEIR POTENTIAL AS ANTI BIOFOULING AGENTS

Trait-Mediated Indirect Interactions

2012-12-06

THERE IS INCREASING EVIDENCE THAT THE STRUCTURE AND FUNCTIONING OF ECOLOGICAL COMMUNITIES AND ECOSYSTEMS ARE STRONGLY INFLUENCED BY FLEXIBLE TRAITS OF INDIVIDUALS WITHIN SPECIES A DEEP UNDERSTANDING OF HOW TRAIT FLEXIBILITY ALTERS DIRECT AND INDIRECT SPECIES INTERACTIONS IS CRUCIAL FOR ADDRESSING KEY ISSUES IN BASIC AND APPLIED ECOLOGY THIS BOOK PROVIDES AN INTEGRATED PERSPECTIVE ON THE ECOLOGICAL AND EVOLUTIONARY CONSEQUENCES OF INTERACTIONS MEDIATED BY FLEXIBLE SPECIES TRAITS ACROSS A WIDE RANGE OF SYSTEMS IT IS THE FIRST VOLUME SYNTHESIZING THE RAPIDLY EXPANDING RESEARCH FIELD OF TRAIT MEDIATED INDIRECT EFFECTS AND HIGHLIGHTS HOW THE CONCEPTUAL FRAMEWORK OF THESE EFFECTS CAN AID THE UNDERSTANDING OF EVOLUTIONARY PROCESSES POPULATION DYNAMICS COMMUNITY STRUCTURE AND STABILITY AND ECOSYSTEM FUNCTION IT NOT ONLY BRINGS OUT THE IMPORTANCE OF THIS EMERGING FIELD FOR BASIC ECOLOGICAL QUESTIONS BUT ALSO EXPLORES THE IMPLICATIONS OF TRAIT MEDIATED INTERACTIONS FOR THE CONSERVATION OF BIODIVERSITY AND THE RESPONSE OF ECOSYSTEMS TO ANTHROPOGENIC ENVIRONMENTAL CHANGES

Stressors in the Marine Environment

2016

THIS EDITED WORK SUMMARISES THE LATEST ADVANCES IN THE PHYSIOLOGICAL AND ECOLOGICAL RESPONSES OF MARINE SPECIES TO A WIDE RANGE OF POTENTIAL STRESSORS RESULTING FROM CURRENT ANTHROPOGENIC ACTIVITY IT PROVIDES A PERSPECTIVE ON FUTURE OUTCOMES FOR SOME OF THE MOST PRESSING ENVIRONMENTAL ISSUES FACING SOCIETY TODAY

Green Psychology: Nature and Scope for Sustainability

2023-10-31

food webs examine the interactions between organisms to explain ecosystem community structure this book argues how food webs alone cannot depict a true picture of a community it shows that examining other indirect interactions between organisms can help us to better understand the structure and organisation of communities and ecosystems

Ecological Communities

2007-01-04

master s thesis from the year 2023 in the subject business economics business management corporate governance grade 2 7 leuphana universit t l neburg language english abstract recent events such as the 15th conference of parties cop15 and the european green deal have brought biodiversity issues to the forefront of international and european agendas with increasing pressure on companies to improve their disclosure and performance related to biodiversity with growing focus on the relationship between board gender diversity bgd and environmental performance this study investigates the effect of bgd on biodiversity disclosure bd this research explores the relationship between bgd and bd by analysing a sample of 2 793 firm year observations from european non financial companies listed on the european stoxx600 index from 2009 to 2020 a three way fixed effects ordered logistic regression model was employed incorporating legitimacy and critical mass theory the results demonstrate a positive association between bgd and bd with a stronger relationship for companies in exploitative industries however there was no support found for the critical mass theory and no mediating effect of environmental trainings or partnerships was detected these findings highlight the importance of gender

DIVERSITY IN PROMOTING SENSITIVITY TO SOCIETAL AND INSTITUTIONAL CONCERNS AS WELL AS THE NEED FOR INCREASED TRANSPARENCY AND ACCOUNTABILITY IN COMPANIES REPORTING AND ACTIONS RELATED TO BIODIVERSITY THE STUDY S IMPLICATIONS CALL FOR COMPANIES TO TAKE PROACTIVE MEASURES IN PROMOTING DIVERSITY AND SUSTAINABILITY TO MEET GROWING REGULATORY AND STAKEHOLDER DEMANDS

Board Gender Diversity and Biodiversity Disclosure. A European Analysis Focusing on the Mediating Effect of Environmental Trainings and Partnerships

2023-07-17

EXAMINING THE INTERACTION OF BOTTOM UP AND TOP DOWN FORCES IT PRESENTS A UNIQUE SYNTHESIS OF TROPHIC INTERACTIONS WITHIN AND ACROSS ECOSYSTEMS

Trophic Ecology

2015-05-07

A LONG OVERDUE COLLATION OF ALL THAT IS KNOWN ABOUT LIFE IN THE TRENCHES AND THE HADAL COMMUNITIES THEREIN

The Hadal Zone

2015-01-29

BIOGEOCHEMISTRY MAY BE DEFINED AS THE SCIENCE THAT COMBINES BIOLOGICAL AND CHEMICAL PERSPECTIVES FOR THE EXAMINATION OF THE EARTH S SURFACE INCLUDING THE RELATIONS BETWEEN THE BIOSPHERE LITHOSPHERE ATMOSPHERE AND HYDROSPHERE BIOGEOCHEMISTRY IS A COMPARATIVELY RECENTLY DEVELOPED SCIENCE THAT INCORPORATES SCIENTIFIC KNOWLEDGE AND FINDINGS RESEARCH METHODOLOGIES AND MODELS LINKING THE BIOLOGICAL CHEMICAL AND EARTH SCIENCES THEREFORE WHILE IT IS A DEFINITIVE SCIENCE WITH A STRONG THEORETICAL CORE IT IS ALSO DYNAMICALLY AND BROADLY INTERLINKED WITH OTHER SCIENCES THIS BOOK EXAMINES THE COMPLEX SCIENCE OF BIOGEOCHEMISTRY FROM A NOVEL PERSPECTIVE EXAMINING ITS COMPARATIVELY RECENT DEVELOPMENT WHILE ALSO EMPHASIZING ITS INTERLINKED RELATIONSHIP WITH THE EARTH SCIENCES INCLUDING THE COMPLEMENTARY SCIENCE OF GEOCHEMISTRY THE GEOGRAPHICAL SCIENCES BIOGEOGRAPHY OCEANOGRAPHY GEOMATICS EARTH SYSTEMS SCIENCE THE BIOLOGICAL SCIENCES ECOLOGY WILDLIFE STUDIES BIOLOGICAL ASPECTS OF ENVIRONMENTAL SCIENCES AND THE CHEMICAL SCIENCES INCLUDING ENVIRONMENTAL CHEMISTRY AND POLLUTION THE BOOK COVERS CUTTING EDGE TOPICS ON THE SCIENCE OF BIOGEOCHEMISTRY EXAMINING ITS DEVELOPMENT STRUCTURE INTERDISCIPLINARY MULTIDISCIPLINARY AND TRANSDISCIPLINARY RELATIONS AND THE FUTURE OF THE CURRENT COMPLEX KNOWLEDGE SYSTEMS ESPECIALLY IN THE CONTEXT OF TECHNOLOGICAL DEVELOPMENTS AND THE COMPUTER AND DATA FIELDS

Biogeochemistry and the Environment

2023-12-14

THIS BOOK PROVIDES AN INTEGRATED ANALYSIS OF THE METHODOLOGIES AND MAIN PROCESSES OCCURRING AT THE ENTIRE RIVER BASIN FROM UPSTREAM UNTIL THE COAST BY MERGING THE BIOLOGICAL AND HYDROLOGICAL PROCESSES WITH THE SOCIAL AND ECONOMIC COMPONENTS THUS PROVIDING AN INTEGRATED FRAMEWORK FOR RIVER BASIN MANAGEMENT INTEGRATING THE ECOHYDROLOGY APPROACH WITH THE ECOSYSTEM SERVICES CONCEPT

Ecosystem Services and River Basin Ecohydrology

2015-07-17

WITH CONTRIBUTIONS FROM AN IMPRESSIVE GROUP OF ARGENTINEAN AND GERMAN OCEANOGRAPHERS THIS BOOK EXAMINES CLASSICAL ECOLOGICAL ISSUES RELATING TO MARINE ECOSYSTEMS IN THE CONTEXT OF CLIMATE CHANGE IT PAINTS A PICTURE OF MARINE ECOLOGY AT THE CROSSROADS OF GLOBAL WARMING THE BOOK EXAMINES THE FUNDAMENTALS OF MARINE ECOLOGY ECOSYSTEM STABILITY WAT

Marine Ecology in a Changing World

2013-12-04

SEDIMENT DYNAMICS IN FLUVIAL SYSTEMS IS OF GREAT ECOLOGICAL ECONOMIC AND HUMAN HEALTH RELATED SIGNIFICANCE WORLDWIDE APPROPRIATE MANAGEMENT STRATEGIES ARE THEREFORE NEEDED TO LIMIT MAINTENANCE COSTS AS WELL AS MINIMIZE POTENTIAL HAZARDS TO THE AQUATIC AND ADJACENT ENVIRONMENTS HUMAN INTERVENTION RANGING FROM NUTRIENT POLLUTANT RELEASE TO PHYSICAL MODIFICATIONS HAS A LARGE IMPACT ON SEDIMENT QUANTITY AND QUALITY AND THUS ON RIVER MORPHOLOGY AS WELL AS ON ECOLOGICAL FUNCTIONING TRULY UNDERSTANDING SEDIMENT DYNAMICS REQUIRES AS A CONSEQUENCE A MULTIDISCIPLINARY APPROACH RIVER SEDIMENTATION CONTAINS THE PEER REVIEWED SCIENTIFIC CONTRIBUTIONS PRESENTED AT THE 13TH INTERNATIONAL SYMPOSIUM ON RIVER SEDIMENTATION ISRS 2016 STUTTGART GERMANY 19 22 SEPTEMBER 2016 AND INCLUDES RECENT ACCOMPLISHMENTS IN THEORETICAL DEVELOPMENTS NUMERICAL MODELLING EXPERIMENTAL LABORATORY WORK FIELD INVESTIGATIONS AND MONITORING AS WELL AS MANAGEMENT METHODOLOGIES

River Sedimentation

2016-11-30

OCEANOGRAPHY AND MARINE BIOLOGY AN ANNUAL REVIEW REMAINS ONE OF THE MOST CITED SOURCES IN MARINE SCIENCE AND OCEANOGRAPHY THE EVER INCREASING INTEREST IN WORK IN OCEANOGRAPHY AND MARINE BIOLOGY AND ITS RELEVANCE TO GLOBAL ENVIRONMENTAL ISSUES ESPECIALLY GLOBAL CLIMATE CHANGE AND ITS IMPACTS CREATES A DEMAND FOR AUTHORITATIVE REVIEWS SUMMARIZING THE RESULTS OF RECENT RESEARCH THIS VOLUME COVERS TOPICS THAT INCLUDE RESTING CYSTS FROM COASTAL MARINE PLANKTON FACILITATION CASCADES IN MARINE ECOSYSTEMS AND THE WAY THAT HUMAN ACTIVITIES ARE RAPIDLY ALTERING THE SENSORY LANDSCAPE AND BEHAVIOUR OF MARINE ANIMALS FOR MORE THAN 50 YEARS OMBAR HAS BEEN AN ESSENTIAL REFERENCE FOR RESEARCH WORKERS AND STUDENTS IN ALL FIELDS OF MARINE SCIENCE FROM VOLUME 57 A NEW INTERNATIONAL EDITORIAL BOARD ENSURES GLOBAL RELEVANCE WITH EDITORS FROM THE UK IRELAND CANADA AUSTRALIA AND SINGAPORE THE SERIES VOLUMES FIND A PLACE IN THE LIBRARIES OF NOT ONLY MARINE LABORATORIES AND INSTITUTES BUT ALSO UNIVERSITIES PREVIOUS VOLUME IMPACT FACTORS INCLUDE VOLUME 53 4 545 VOLUME 54 7 000 VOLUME 55 5 071 GUIDELINES FOR CONTRIBUTORS INCLUDING INFORMATION ON ILLUSTRATION REQUIREMENTS CAN BE DOWNLOADED ON THE DOWNLOADS UPDATES TAB ON THE VOLUME S CRC PRESS WEBPAGE CHAPTERS 3 4 5 AND 7 OF THIS BOOK ARE FREELY AVAILABLE AS A DOWNLOADABLE OPEN ACCESS PDF UNDER A CREATIVE COMMONS ATTRIBUTION NON COMMERCIAL NO DERIVATIVES 4 0 LICENSE THE LINKS CAN BE FOUND ON THE BOOK S ROUTLEDGE WEB PAGE AT ROUTLEDGE COM 9780367134150

Oceanography and Marine Biology

2019-08-02

MICROBIAL SYNTROPHY MEDIATED ECO ENTERPRISING SUMMARIZES AND REVIEWS POSSIBLE MICROBIAL APPLICATIONS FOR ECO

INDUSTRIAL SUSTAINABILITY THE BOOK EMPHASIZES A WIDE SPECTRUM OF EXPERIMENTAL AND THEORETICAL CONTRIBUTIONS FROM EMINENT RESEARCHERS IN THE FIELD IN 13 CHAPTERS THERE IS A FOCUS ON THE MICROBIAL INTRUSIONS FOR REMEDIATING SITES BY ACCUMULATED PESTICIDES HEAVY METALS POLYAROMATIC HYDROCARBONS AND OTHER INDUSTRIAL EFFLUENTS MOREOVER THE POTENTIALITY AND KEY MECHANISMS USED BY MICROORGANISMS FOR SUSTAINABLE ENVIRONMENTAL MANAGEMENT AND THEIR PROSPECTS ARE ALSO CONSIDERED IN THIS NEW RELEASE THE TERM SYNTROPHY FOR NUTRITIONAL INTERDEPENDENCE IS OFTEN USED IN MICROBIOLOGY TO DESCRIBE THE SYMBIOTIC RELATIONSHIP BETWEEN BACTERIAL SPECIES UNDERSTANDING SUCH INTERACTIONS CAN BE OF CONSIDERABLE INTEREST WHEN WE COME TO MANIPULATE MICROBES TO OUR OWN BENEFIT SUCH AS BY DISRUPTING PATHOGENIC COMMUNITIES WITH ANTIBIOTICS OR BY PROMOTING EFFICIENCY IN COMMUNITIES THAT PRODUCE ENERGY OR BREAK DOWN WASTE SUMMARIZES AND REVIEWS POSSIBLE MICROBIAL APPLICATIONS FOR ECO INDUSTRIAL SUSTAINABILITY INCLUDES A WIDE SPECTRUM OF EXPERIMENTAL AND THEORETICAL CONTRIBUTIONS FROM EMINENT RESEARCHERS IN THE FIELD FOCUSES ON MICROBIAL INTRUSIONS FOR REMEDIATING SITES AND OTHER INDUSTRIAL EFFLUENTS

Microbial Syntrophy-mediated Eco-enterprising

2022-02-09

A COMPACT OVERVIEW OF THE PROCESS THEORY AND PRACTICE OF CONSERVATION AND ITS CENTRAL PLACE IN ENVIRONMENTAL ISSUES

Conservation

2013-01-03

THERE IS INCREASING EVIDENCE THAT THE STRUCTURE AND FUNCTIONING OF ECOLOGICAL COMMUNITIES AND ECOSYSTEMS ARE STRONGLY INFLUENCED BY FLEXIBLE TRAITS OF INDIVIDUALS WITHIN SPECIES A DEEP UNDERSTANDING OF HOW TRAIT FLEXIBILITY

ALTERS DIRECT AND INDIRECT SPECIES INTERACTIONS IS CRUCIAL FOR ADDRESSING KEY ISSUES IN BASIC AND APPLIED ECOLOGY THIS BOOK PROVIDES AN INTEGRATED PERSPECTIVE ON THE ECOLOGICAL AND EVOLUTIONARY CONSEQUENCES OF INTERACTIONS MEDIATED BY FLEXIBLE SPECIES TRAITS ACROSS A WIDE RANGE OF SYSTEMS IT IS THE FIRST VOLUME SYNTHESIZING THE RAPIDLY EXPANDING RESEARCH FIELD OF TRAIT MEDIATED INDIRECT EFFECTS AND HIGHLIGHTS HOW THE CONCEPTUAL FRAMEWORK OF THESE EFFECTS CAN AID THE UNDERSTANDING OF EVOLUTIONARY PROCESSES POPULATION DYNAMICS COMMUNITY STRUCTURE AND STABILITY AND ECOSYSTEM FUNCTION IT NOT ONLY BRINGS OUT THE IMPORTANCE OF THIS EMERGING FIELD FOR BASIC ECOLOGICAL QUESTIONS BUT ALSO EXPLORES THE IMPLICATIONS OF TRAIT MEDIATED INTERACTIONS FOR THE CONSERVATION OF BIODIVERSITY AND THE RESPONSE OF ECOSYSTEMS TO ANTHROPOGENIC ENVIRONMENTAL CHANGES PUBLISHER DESCRIPTION

Trait-mediated Indirect Interactions : Ecological and Evolutionary Perspectives

2012

BIODIVERSITY IS THE VARIETY OF ALL THE GENES SPECIES AND ECOSYSTEMS WHICH ARE FOUND ON OUR PLANET IT PROVIDES HUMANITY WITH THE CORNUCOPIA OF GOODS AND SERVICES FROM FOOD ENERGY AND MATERIALS TO THE GENES WHICH PROTECT OUR CROPS AND CURE OUR DISEASES THE LOSS OF THE EARTH S BIOLOGICAL DIVERSITY IS ONE OF THE MOST PRESSING ENVIRONMENTAL AND DEVELOPMENT ISSUES SUSTAINABILITY HIGHLIGHTS THE IDEA THAT THE CURRENT USE OF NATURAL RESOURCES SHOULD NOT DIMINISH THE OPTIONS OF FUTURE GENERATIONS AND MAINTAINING BIODIVERSITY IS CLEARLY ONE OF THE REQUIREMENTS FOR MEETING THIS GOAL BIODIVERSITY CONSERVATION ADDRESSES THE REMARKABLE GROWTH IN CONCERN AT ALL LEVELS FOR LIVING THINGS AND THE ENVIRONMENT AND INCREASED APPRECIATION OF THE LINKS BETWEEN THE STATE OF ECOSYSTEMS AND THE STATE OF HUMANKIND BUILDING ON A WEALTH OF RESEARCH AND ANALYSIS BY THE CONSERVATION COMMUNITY WORLDWIDE THIS BOOK PROVIDES A COMPREHENSIVE AND ACCESSIBLE VIEW OF KEY GLOBAL ISSUES IN BIODIVERSITY IT OUTLINES SOME OF THE BROAD ECOLOGICAL RELATIONSHIPS BETWEEN HUMANS AND THE REST OF THE MATERIAL WORLD AND SUMMARIES INFORMATION ON THE HEALTH OF THE PLANET BIODIVERSITY IS BENEFICIAL TO THE LOCAL ENVIRONMENT AND CAN

ALSO BE A NATURAL FORM OF CROP PROTECTION IN CONVENTIONAL AGRICULTURE BIODIVERSITY IS OFTEN ELIMINATED BY PLANTING LARGE TRACTS OF FIELDS WITH A SINGLE CROP AND KILLING OTHER SPECIES WITH HERBICIDES INSECTICIDES PESTICIDES AND FUNGICIDES IN THE ABSENCE OF BIODIVERSITY THE ARRIVAL OF A SINGLE SPECIES CAN SIGNIFICANTLY AFFECT CROP PRODUCTION AND CONVENTIONAL FARMERS COUNTER THIS WITH CHEMICAL KILLING AGENTS THAT DAMAGE THE ENVIRONMENTAL HEALTH OF THE AREA CONSERVATION IS THE PROTECTION PRESERVATION MANAGEMENT OR RESTORATION OF WILDLIFE AND NATURAL RESOURCES SUCH AS FORESTS AND WATER THROUGH THE CONSERVATION OF BIODIVERSITY AND THE SURVIVAL OF MANY SPECIES AND HABITATS WHICH ARE THREATENED DUE TO HUMAN ACTIVITIES CAN BE ENSURED THERE IS AN URGENT NEED NOT ONLY TO MANAGE AND CONSERVE THE BIOTIC WEALTH BUT ALSO RESTORE THE DEGRADED ECOSYSTEMS THIS BOOK WILL DEFINITELY SERVE AS AN EXCELLENT REFERENCE MATERIAL AND PRACTICAL GUIDE FOR TEACHERS RESEARCH WORKERS STUDENTS AND ENVIRONMENTALISTS

Biodiversity and Environmental Conservation

2018-10-09

UNDERSTANDING HOW BIOLOGICAL DIVERSITY AFFECTS ECOSYSTEM FUNCTIONING IS A KEY QUESTION IN MODERN ECOLOGY THIS IS OF PARTICULAR IMPORTANCE IN THE GENERAL CONTEXT OF RECENT GLOBAL CHANGES CAUSED BY HUMAN ACTIVITIES SUCH AS WATER ABSTRACTION FLOW REGULATION SHIFTS IN AGRICULTURAL PRACTICES CONTAMINATION CLIMATE CHANGES AND BIOLOGICAL INVASIONS THESE CHANGES ARE AFFECTING BIODIVERSITY ECOSYSTEM FUNCTIONING AND THEIR COMPLEX INTERACTIONS SIMULTANEOUSLY HOWEVER OUR ABILITY TO UNDERSTAND HOW GENES INDIVIDUALS POPULATIONS COMMUNITIES AND ECOSYSTEMS MAY RESPOND TO SUCH CHANGES IS LIMITED DESPITE ECOLOGISTS FREQUENTLY BEING REQUESTED TO PROVIDE POLICYMAKERS AND MANAGERS WITH PREDICTIONS INDEED THE SPECIES THAT COMPOSED BIODIVERSITY CAN ESTABLISH COMPLEX TROPHIC LINKS BETWEEN THEM IN THE ECOSYSTEMS THIS STRUCTURE OF FOOD WEBS IS UNDER THE PERMANENT CONSTRAINT OF COMMUNITY DYNAMICS WHICH CONNECTS SPECIES POPULATIONS COMMUNITIES AND ECOSYSTEMS THEREFORE THE RESPONSE OF FOOD WEBS TO PERTURBATIONS CAN HELP ECOLOGISTS TO BETTER UNDERSTAND THE RELATIONSHIP BETWEEN BIOLOGICAL

DIVERSITY AND ECOSYSTEM FUNCTIONING

Effects of Non-Random Sources of Alteration on Biodiversity and Ecosystem Functioning

2023-11-15

MICROBE MEDIATED REMEDIATION OF ENVIRONMENTAL CONTAMINANTS PRESENTS RECENT SCIENTIFIC PROGRESS IN APPLYING MICROBES FOR ENVIRONMENTAL MANAGEMENT THE BOOK EXPLORES THE CURRENT EXISTING PRACTICAL APPLICATIONS AND PROVIDES INFORMATION TO HELP READERS DEVELOP NEW PRACTICES AND APPLICATIONS EDITED BY RECOGNIZED LEADERS IN THE FIELD THIS PENETRATING ASSESSMENT OF OUR PROGRESS TO DATE IN DEPLOYING MICROORGANISMS TO THE ADVANTAGE OF ENVIRONMENTAL MANAGEMENT AND BIOTECHNOLOGY WILL BE WIDELY WELCOMED BY THOSE WORKING IN SOIL CONTAMINATION MANAGEMENT AGRICULTURE ENVIRONMENT MANAGEMENT SOIL MICROBIOLOGY AND WASTE MANAGEMENT THE POLLUTING EFFECTS ON THE WORLD AROUND US OF SOIL EROSION THE UNWANTED MIGRATION OF SEDIMENTS CHEMICAL FERTILIZERS AND PESTICIDES AND THE IMPROPER TREATMENT OF HUMAN AND ANIMAL WASTES HAVE RESULTED IN SERIOUS ENVIRONMENTAL AND SOCIAL PROBLEMS AROUND THE WORLD PROBLEMS WHICH REQUIRE US TO LOOK FOR SOLUTIONS ELSEWHERE THAN ESTABLISHED PHYSICAL AND CHEMICAL TECHNOLOGIES OFTEN THE ANSWER LIES IN HYBRID APPLICATIONS IN WHICH MICROBIAL METHODS ARE COMBINED WITH PHYSICAL AND CHEMICAL ONES WHEN WE REMEMBER THAT THESE HIGHLY EFFECTIVE MICROORGANISMS CULTURED FOR A VARIETY OF APPLICATIONS ARE BUT A TINY FRACTION OF THOSE TO BE FOUND IN THE WORLD AROUND US WE REALIZE THE VASTNESS OF THE UNTAPPED AND BENEFICIAL POTENTIAL OF MICROORGANISMS EXPLORES MICROBIAL APPLICATION REDRESSING FOR SOIL AND WATER CONTAMINATION CHALLENGES INCLUDES INFORMATION ON MICROBIAL SYNTHESIZED NANOMATERIALS FOR REMEDIATION OF CONTAMINATED SOILS PRESENTS A UNIQUELY HYBRID APPROACH COMBINING MICROBIAL INTERACTIONS WITH OTHER CHEMICAL AND PHYSICAL METHODS

Microbe Mediated Remediation of Environmental Contaminants

2020-10-14

This book assesses river health in the Lancang River basin with regard to the impacts of hydropower projects It studies key components of the transboundary effects of Chinese dams on the Lancang River including its hydrology sediment transport water temperature and fish community It also investigates the specific impacts of hydropower on women s lives and livelihoods and factors that influence women s participation in river health management In closing the lessons learned regarding environmental protection and hydropower development in the Lancang River basin are shared e g with hydropower developers and regulators in Laos

Effects of Ice Loss on Marine Biodiversity

2022-01-06

Development is a complex and highly dynamic process involving the cross talk among genes maternal effects and environmental circumstances Widespread evidence from plant to animal species show that variation in developmental conditions can modulate life history trajectories and influence key traits such as growth reproduction and senescence These effects are not limited to a single generation but can also be passed on future generations This book aims to bring together studies of early life effects from the fields of evolutionary biology global change biology and biomedicine to synthesise and improve current knowledge of the mechanisms involved and how variation in early life conditions translates into Darwinian fitness outcomes relying on examples of organisms responses to the ongoing and future environmental challenges of the Anthropocene This book takes a novel approach to address the adaptive meaning of early life effects The book has a broad scientific approach targeting eco evolutionary biologists behavioural biologists eco physiologists eco

TOXICOLOGISTS AS WELL AS EPIDEMIOLOGISTS AND BIOMEDICAL SCIENTISTS

Balancing River Health and Hydropower Requirements in the Lancang River Basin

2018-09-12

TODAY 20 PERCENT OF THE GLOBAL FOOD SUPPLY RELIES ON URBAN AGRICULTURE SOCIAL ECOLOGICAL SYSTEMS SHAPED BY BOTH HUMAN AND NON HUMAN INTERACTIONS THIS BOOK SHOWS HOW URBAN AGROECOLOGISTS MEASURE FLORA AND FAUNA THAT UNDERPIN THE ECOLOGICAL DYNAMICS OF THESE SYSTEMS AND HOW PEOPLE MANAGE AND BENEFIT FROM THESE SYSTEMS IT EXPLAINS HOW THE SOCIOPOLITICAL LANDSCAPE IN WHICH THESE SYSTEMS ARE EMBEDDED CAN IN TURN SHAPE THE SOCIAL ECOLOGICAL POLITICAL AND ECONOMIC DYNAMICS WITHIN THEM SYNTHESIZING INTERDISCIPLINARY APPROACHES IN URBAN AGROECOLOGY IN THE NATURAL AND SOCIAL SCIENCES THE BOOK EXPLORES METHODOLOGIES AND NEW DIRECTIONS IN RESEARCH THAT CAN BE ADOPTED BY SCHOLARS AND PRACTITIONERS ALIKE WITH CONTRIBUTIONS FROM RESEARCHERS UTILIZING BOTH SOCIAL AND NATURAL SCIENCE APPROACHES URBAN AGROECOLOGY DESCRIBES THE CURRENT SOCIAL ENVIRONMENTAL UNDERSTANDINGS OF THE SCIENCE THE MOVEMENT AND THE PRACTICES IN URBAN AGROECOLOGY BY INVESTIGATING THE ROLE OF AGROECOLOGY IN CITIES THE BOOK CALLS FOR THE CREATION OF SPACES FOR FOOD TO BE SUSTAINABLY GROWN IN URBAN SPACES AN URBAN AGRICULTURE UA MOVEMENT ESSENTIAL READING FOR GRADUATE STUDENTS PRACTITIONERS POLICY MAKERS AND RESEARCHERS THIS BOOK CHARTS THE COURSE FOR ACCELERATING THIS MOVEMENT

The effects of climate change and anthropogenic activities on patterns,

STRUCTURES AND FUNCTIONS OF TERRESTRIAL ECOSYSTEMS

2023-10-31

IN THE PAST TWO DECADES AN INCREASING NUMBER OF ECOLOGISTS HAVE STARTED TO INVESTIGATE THE IMPORTANCE OF BIODIVERSITY FOR ECOLOGICAL PROCESSES SUCH AS ENERGY FLOW AND NUTRIENT CYCLING OFTEN REFERRED TO AS ECOSYSTEM FUNCTIONING INSECTS ARE A DOMINANT COMPONENT OF BIODIVERSITY IN TERRESTRIAL ECOSYSTEMS AND PLAY A KEY ROLE IN MEDIATING THE RELATIONSHIP BETWEEN PLANTS AND ECOSYSTEM PROCESSES THIS VOLUME IS THE FIRST TO SUMMARIZE THEIR EFFECTS ON ECOSYSTEM FUNCTIONING FOCUSING MAINLY BUT NOT EXCLUSIVELY ON HERBIVOROUS INSECTS RENOWNED AUTHORS WITH EXTENSIVE EXPERIENCE IN THE FIELD OF PLANT INSECT INTERACTIONS CONTRIBUTE TO THE VOLUME USING EXAMPLES FROM THEIR OWN WORK IN ADDITION TO PROVIDING CONCISE REVIEWS OF THE FIELD THIS VOLUME DISCUSSES IN DETAIL THE ADVANTAGES AND DISADVANTAGES OF VARIOUS TECHNIQUES OF MANIPULATING INSECT HERBIVORY THUS THE TEXT PROVIDES BOTH A THEORETICAL BASIS AS WELL AS PRACTICAL ADVICE FOR FUTURE MANIPULATIVE STUDIES OF BIODIVERSITY ECOSYSTEM FUNCTIONING

Biodiversity Conservation and Ecological Function Restoration in Freshwater Ecosystems

2023-03-13

A CRITICAL SYNTHESIS OF KEY CONCEPTS FOR UNDERSTANDING HUMAN IMPACTS ON MARINE ECOSYSTEMS AND FOR DECISION MAKING BASED ON ECOSYSTEM SERVICES

Development Strategies and Biodiversity

2022-02-15

ecology and biodiversity of benthos provides insights into the characteristic features of marine and estuarine benthos that play an important role in coastal ecosystem functioning a primary level in the food chain the book provides the latest information on multidisciplinary reflections by various researchers studying the benthic community through the chapters ecosystem services are explored as a way to share approaches and scientific methods to achieve knowledge based sustainable planning and management of benthic ecosystems this is a helpful guide for anyone working on marine and estuarine environments and for those who need an introduction to benthic ecology the book has a wide range of scientific coverage since it caters primarily to the requirement of marine ecologists marine benthologists eia experts aquatic researchers scientists teachers and research scholars in addition to this it also serves as a reference for postgraduate undergraduate students studying aquatic ecosystems includes analytical methods and detailed statistical interpretation for qualitative and quantitative analyses of marine and estuarine benthic community structures presents figures schematic diagrams and photographs related to benthic diversity of coastal ecosystem to aid in understanding protocols for the assessment of the benthic community s structure and function includes case studies throughout each chapter to increase understanding of benthic communities

Urban Agroecology

2020-12-16

in the past two decades an increasing number of ecologists have started to investigate the importance of biodiversity for ecological processes such as energy flow and nutrient cycling often referred to as ecosystem

FUNCTIONING INSECTS ARE A DOMINANT COMPONENT OF BIODIVERSITY IN TERRESTRIAL ECOSYSTEMS AND PLAY A KEY ROLE IN MEDIATING THE RELATIONSHIP BETWEEN PLANTS AND ECOSYSTEM PROCESSES THIS VOLUME IS THE FIRST TO SUMMARIZE THEIR EFFECTS ON ECOSYSTEM FUNCTIONING FOCUSING MAINLY BUT NOT EXCLUSIVELY ON HERBIVOROUS INSECTS RENOWNED AUTHORS WITH EXTENSIVE EXPERIENCE IN THE FIELD OF PLANT INSECT INTERACTIONS CONTRIBUTE TO THE VOLUME USING EXAMPLES FROM THEIR OWN WORK IN ADDITION TO PROVIDING CONCISE REVIEWS OF THE FIELD THIS VOLUME DISCUSSES IN DETAIL THE ADVANTAGES AND DISADVANTAGES OF VARIOUS TECHNIQUES OF MANIPULATING INSECT HERBIVORY THUS THE TEXT PROVIDES BOTH A THEORETICAL BASIS AS WELL AS PRACTICAL ADVICE FOR FUTURE MANIPULATIVE STUDIES OF BIODIVERSITY ECOSYSTEM FUNCTIONING

Insects and Ecosystem Function

2008

THIS OPEN ACCESS BOOK IDENTIFIES AND DISCUSSES BIODIVERSITY S CONTRIBUTION TO PHYSICAL MENTAL AND SPIRITUAL HEALTH AND WELLBEING FURTHERMORE THE BOOK IDENTIFIES THE IMPLICATIONS OF THIS RELATIONSHIP FOR NATURE CONSERVATION PUBLIC HEALTH LANDSCAPE ARCHITECTURE AND URBAN PLANNING AND CONSIDERS THE OPPORTUNITIES OF NATURE BASED SOLUTIONS FOR CLIMATE CHANGE ADAPTATION THIS TRANSDISCIPLINARY BOOK WILL ATTRACT A WIDE AUDIENCE INTERESTED IN BIODIVERSITY ECOLOGY RESOURCE MANAGEMENT PUBLIC HEALTH PSYCHOLOGY URBAN PLANNING AND LANDSCAPE ARCHITECTURE THE EMPHASIS IS ON MULTIPLE HUMAN HEALTH BENEFITS FROM BIODIVERSITY IN PARTICULAR WITH RESPECT TO THE INCREASING CHALLENGE OF CLIMATE CHANGE THIS MAKES THE BOOK UNIQUE TO OTHER BOOKS THAT FOCUS EITHER ON BIODIVERSITY AND PHYSICAL HEALTH OR NATURAL ENVIRONMENTS AND MENTAL WELLBEING THE BOOK IS WRITTEN AS A DEFINITIVE GO TO BOOK FOR THOSE WHO ARE NEW TO THE FIELD OF BIODIVERSITY AND HEALTH

Marine Ecosystems

2015-06-18

BIODIVERSITY IN DRYLANDS THE FIRST INTERNATIONALLY BASED SYNTHESIS VOLUME IN THE LONG TERM ECOLOGICAL RESEARCH LTER NETWORK SERIES UNIFIES THE CONCEPTS OF SPECIES AND LANDSCAPE DIVERSITY WITH RESPECT TO DESERTS WITHIN THIS FRAMEWORK THE BOOK TREATS SEVERAL EMERGING THEMES AMONG THEM ? ½ HOW ANIMAL BIODIVERSITY CAN BE SUPPORTED IN DESERTS ? ½ DIVERSITY S RELATION TO HABITAT STRUCTURE ENVIRONMENTAL VARIABILITY AND SPECIES INTERACTIONS ? ½ THE RELATION BETWEEN SPATIAL SCALE AND DIVERSITY ? ½ HOW TO USE A LANDSCAPE SIMULATION MODEL TO UNDERSTAND DIVERSITY ? ½ MICROBIAL CONTRIBUTIONS TO BIODIVERSITY IN DESERTS ? ½ SPECIES DIVERSITY AND ECOSYSTEM PROCESSES ? ½ RESOURCE PARTITIONING AND BIODIVERSITY IN FRACTAL ENVIRONMENTS ? ½ EFFECTS OF GRAZING ON BIODIVERSITY ? ½ RECONCILIATION ECOLOGY AND THE FUTURE OF CONSERVATION MANAGEMENT IN THE FACE OF GLOBAL CHANGE INTEGRATION IS CRUCIAL FOR DEALING WITH THE PROBLEM OF SUSTAINING BIODIVERSITY THIS BOOK PROMISES TO BE A VITAL RESOURCE FOR STUDENTS RESEARCHERS AND MANAGERS INTERESTED IN INTEGRATIVE SPECIES RESOURCE AND LANDSCAPE DIVERSITIES

Ecology and Biodiversity of Benthos

2022-03-26

HOW WILL BIODIVERSITY LOSS AFFECT ECOSYSTEM FUNCTIONING ECOSYSTEM SERVICES AND HUMAN WELL BEING IN AN AGE OF ACCELERATING BIODIVERSITY LOSS THIS TIMELY AND CRITICAL VOLUME SUMMARIZES RECENT ADVANCES IN BIODIVERSITY ECOSYSTEM FUNCTIONING RESEARCH AND EXPLORES THE ECONOMICS OF BIODIVERSITY AND ECOSYSTEM SERVICES THE BOOK STARTS BY SUMMARIZING THE DEVELOPMENT OF THE BASIC SCIENCE AND PROVIDES A META ANALYSIS THAT QUANTITATIVELY TESTS SEVERAL BIODIVERSITY AND ECOSYSTEM FUNCTIONING HYPOTHESES IT THEN DESCRIBES THE NATURAL SCIENCE FOUNDATIONS OF BIODIVERSITY AND ECOSYSTEM FUNCTIONING RESEARCH INCLUDING QUANTIFYING FUNCTIONAL DIVERSITY THE

DEVELOPMENT OF THE FIELD INTO A PREDICTIVE SCIENCE THE EFFECTS OF STABILITY AND COMPLEXITY METHODS TO QUANTIFY MECHANISMS BY WHICH DIVERSITY AFFECTS FUNCTIONING THE IMPORTANCE OF TROPHIC STRUCTURE MICROBIAL ECOLOGY AND SPATIAL DYNAMICS FINALLY THE BOOK TAKES RESEARCH ON BIODIVERSITY AND ECOSYSTEM FUNCTIONING FURTHER THAN IT HAS EVER GONE INTO THE HUMAN DIMENSION DESCRIBING THE MOST PRESSING ENVIRONMENTAL CHALLENGES THAT FACE HUMANITY AND THE EFFECTS OF DIVERSITY ON CLIMATE CHANGE MITIGATION RESTORATION OF DEGRADED HABITATS MANAGED ECOSYSTEMS POLLINATION DISEASE AND BIOLOGICAL INVASIONS HOWEVER WHAT MAKES THIS VOLUME TRULY UNIQUE ARE THE CHAPTERS THAT CONSIDER THE ECONOMIC PERSPECTIVE THESE INCLUDE A SYNTHESIS OF THE ECONOMICS OF ECOSYSTEM SERVICES AND BIODIVERSITY AND THE OPTIONS OPEN TO POLICY MAKERS TO ADDRESS THE FAILURE OF MARKETS TO ACCOUNT FOR THE LOSS OF ECOSYSTEM SERVICES AN EXAMINATION OF THE CHALLENGES OF VALUING ECOSYSTEM SERVICES AND HENCE TO UNDERSTANDING THE HUMAN CONSEQUENCES OF DECISIONS THAT NEGLECT THESE SERVICES AND AN EXAMINATION OF THE WAYS IN WHICH ECONOMISTS ARE CURRENTLY INCORPORATING BIODIVERSITY AND ECOSYSTEM FUNCTIONING RESEARCH INTO DECISION MODELS FOR THE CONSERVATION AND MANAGEMENT OF BIODIVERSITY A FINAL SECTION DESCRIBES NEW ADVANCES IN ECOINFORMATICS THAT WILL HELP TRANSFORM THIS FIELD INTO A GLOBALLY PREDICTIVE SCIENCE AND SUMMARIZES THE ADVANCEMENTS AND FUTURE DIRECTIONS OF THE FIELD THE ULTIMATE CONCLUSION IS THAT BIODIVERSITY IS AN ESSENTIAL ELEMENT OF ANY STRATEGY FOR SUSTAINABLE DEVELOPMENT

Insects and Ecosystem Function

2004-07-26

BASED ON PRINCIPLES OF THE CONSERVATION AND OPTIMIZATION OF BIODIVERSITY AND OF EQUITY AND SUSTAINABILITY THIS BOOK FOCUSES ON THE ECOLOGY OF THE COFFEE AGROECOSYSTEM AS A MODEL FOR A SUSTAINABLE AGRICULTURAL ECOSYSTEM IT DRAWS ON THE AUTHORS OWN RESEARCH CONDUCTED OVER THE LAST TWENTY YEARS AS WELL AS INCORPORATING THE VAST LITERATURE THAT HAS BEEN GENERATED ON COFFEE AGROECOSYSTEMS FROM AROUND THE WORLD THE BOOK USES AN INTEGRATED APPROACH THAT WEAVES TOGETHER VARIOUS LINES OF RESEARCH TO UNDERSTAND THE

ECOLOGY OF A VERY DIVERSE TROPICAL AGROFORESTRY SYSTEM KEY CONCEPTS EXPLORED INCLUDE BIODIVERSITY PATTERNS METAPOPULATION DYNAMICS AND ECOLOGICAL NETWORKS THESE ARE ALL SET IN A SOCIOECONOMIC AND POLITICAL FRAMEWORK WHICH RELATES THEM TO THE REALITIES OF FARMERS LIVELIHOODS THE AUTHORS PROVIDE A NOVEL SYNTHESIS THAT WILL GENERATE NEW UNDERSTANDING AND CAN BE APPLIED TO OTHER EXAMPLES OF SUSTAINABLE AGRICULTURE AND FOOD PRODUCTION THIS SYNTHESIS ALSO EXPLAINS THE ECOSYSTEM SERVICES PROVIDED BY THE APPROACH INCLUDING THE ECONOMIC FAIR TRADE AND POLITICAL ASPECTS SURROUNDING THIS ALL IMPORTANT GLOBAL COMMODITY

Plant and Insect-mediated Invasiveness of Phragmites Australis and the Litter Dynamics and Biodiversity of Six Freshwater Macrophytes

2006

THE 7 VOLUME ENCYCLOPEDIA OF BIODIVERSITY SECOND EDITION MAINTAINS THE REPUTATION OF THE HIGHLY REGARDED ORIGINAL PRESENTING THE MOST CURRENT INFORMATION AVAILABLE IN THIS GLOBALLY CRUCIAL AREA OF RESEARCH AND STUDY IT BRINGS TOGETHER THE DIMENSIONS OF BIODIVERSITY AND EXAMINES BOTH THE SERVICES IT PROVIDES AND THE MEASURES TO PROTECT IT MAJOR THEMES OF THE WORK INCLUDE THE EVOLUTION OF BIODIVERSITY SYSTEMS FOR CLASSIFYING AND DEFINING BIODIVERSITY ECOLOGICAL PATTERNS AND THEORIES OF BIODIVERSITY AND AN ASSESSMENT OF CONTEMPORARY PATTERNS AND TRENDS IN BIODIVERSITY THE SCIENCE OF BIODIVERSITY HAS BECOME THE SCIENCE OF OUR FUTURE IT IS AN INTERDISCIPLINARY FIELD SPANNING AREAS OF BOTH PHYSICAL AND LIFE SCIENCES OUR AWARENESS OF THE LOSS OF BIODIVERSITY HAS BROUGHT A LONG OVERDUE APPRECIATION OF THE MAGNITUDE OF THIS LOSS AND A DETERMINATION TO DEVELOP THE TOOLS TO PROTECT OUR FUTURE SECOND EDITION INCLUDES OVER 100 NEW ARTICLES AND 226 UPDATED ARTICLES COVERING THIS MULTIDISCIPLINARY FIELD FROM EVOLUTION TO HABITS TO ECONOMICS IN 7 VOLUMES THE EDITORS OF THIS EDITION ARE ALL WELL RESPECTED INSTANTLY RECOGNIZABLE ACADEMICS OPERATING AT THE TOP OF THEIR RESPECTIVE FIELDS IN BIODIVERSITY RESEARCH READERS CAN BE ASSURED THAT THEY ARE READING MATERIAL THAT HAS BEEN METICULOUSLY CHECKED AND REVIEWED BY EXPERTS APPROXIMATELY 1 800 FIGURES AND 350 TABLES COMPLEMENT THE TEXT AND MORE THAN 3 000 GLOSSARY

ENTRIES EXPLAIN KEY TERMS

Biodiversity and Health in the Face of Climate Change

2019-06-11

FRED VAN DYKE S NEW TEXTBOOK CONSERVATION BIOLOGY FOUNDATIONS CONCEPTS APPLICATIONS 2ND EDITION REPRESENTS A MAJOR NEW TEXT FOR ANYONE INTERESTED IN CONSERVATION DRAWING ON HIS VAST EXPERIENCE VAN DYKE S ORGANIZATIONAL CLARITY AND READABLE STYLE MAKE THIS BOOK AN INVALUABLE RESOURCE FOR STUDENTS IN CONSERVATION AROUND THE GLOBE PRESENTING KEY INFORMATION AND WELL SELECTED EXAMPLES THIS STUDENT FRIENDLY VOLUME CAREFULLY INTEGRATES THE SCIENCE OF CONSERVATION BIOLOGY WITH ITS IMPLICATIONS FOR ETHICS LAW POLICY AND ECONOMICS

Biodiversity in Drylands

2005

HERBIVORES INFLUENCE AND OFTEN REGULATE ENERGY FLOW I INVESTIGATED INTERACTIONS BETWEEN HERBIVORY AND THE FOODS ON WHICH GEESE RELY WHILE NESTING AND REARING THEIR BROODS ON THE YUKON KUSKOKWIM DELTA IN SOUTHWESTERN ALASKA IN A CAPTIVE CACKLING CANADA GOSLING BRANTA CANADENSIS MINIMA EXPERIMENT I DECOUPLED THE EFFECTS OF SEASONAL DECLINES IN FORAGE QUALITY AND AVAILABILITY ON GOSLING DEVELOPMENT AN 11 DECLINE IN FORAGE QUALITY TRANSLATED TO GOSLINGS THAT WERE STRUCTURALLY SMALLER AND 100 G LIGHTER AT 31 DAYS OF AGE FORAGE AVAILABILITY HAD SIMILAR EFFECTS ON GOSLING SIZE AND THE COMBINED MAGNITUDE OF THESE EFFECTS ARE SIMILAR TO THOSE OBSERVED IN WILD POPULATIONS I MANIPULATED WITHIN SEASON GRAZING HISTORY OF CAREX SUBSPATHACEA SWARDS WITHIN BROOD REARING AREAS USED BY BLACK BRANT GEESE BRANTA BERNICLA NIGRICANS SPATIAL VARIATION IN FORAGE QUALITY AND AVAILABILITY EXCEEDED SEASONAL VARIATION BRANT CONSUMED OVER 95 OF THE ANNUAL ABOVEGROUND PRODUCTION OF THESE SWARDS

WITHOUT ANY SHORT OR APPARENT LONG TERM EFFECTS ON ABOVEGROUND GROWTH ADDING GRAZING PRESSURE TO C RAMENSKII OR REMOVING GRAZING PRESSURE FROM C SUBSPATHACEA RESULTED IN A BI DIRECTIONAL SHIFT IN THE MORPHOLOGY AND NUTRITIONAL CHARACTERISTICS OF THESE SEDGES THE AREAL EXTENT OF C SUBSPATHACEA INCREASED 2 TO 8 OF THE TUTAKOKE LANDSCAPE WITH A CONCOMITANT DECREASE IN C RAMENSKII MEADOWS BETWEEN 1991 1998 BRANT HAVE BEEN INCREASING THE CARRYING CAPACITY OF THE TUTAKOKE RIVER COLONY FOLLOWING A POPULATION DECLINE IN THE EARLY 1980 S THE POPULATION HAS INCREASED BEGINNING IN 1988 YET REMAINS BELOW HISTORIC NUMBERS DENSITY DEPENDENT EFFECTS ON GOSLING GROWTH ACCOMPANIED THE POPULATION INCREASE INITIALLY HOWEVER GOSLING MASS HAS INCREASED OVER THE PAST DECADE DUE TO HERBIVORE MEDIATED INCREASES IN THE AREAL EXTENT OF GRAZING LAWNS LEAVES III IV

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