

immigration in biology

immigration in biology is an essential concept that shapes the structure, diversity, and dynamics of living populations. Understanding this topic is important for anyone interested in ecology, evolution, conservation, and environmental science. This article explores the meaning of immigration in biology, its mechanisms, the ecological and evolutionary impacts it has, real-world examples, and modern applications. By the end, readers will appreciate the complexity and significance of immigration in shaping biological communities, as well as its importance in research, conservation, and managing ecosystems. Whether you're a student, researcher, or enthusiast, this comprehensive guide provides detailed insights using clear language, engaging examples, and factual information. Continue reading to discover how immigration in biology influences life on our planet and why it remains a vital area of study today.

- Definition and Overview of Immigration in Biology
- Mechanisms and Factors Influencing Immigration
- Ecological Impacts of Immigration
- Evolutionary Consequences of Immigration
- Examples of Immigration in Biological Systems
- Modern Applications and Importance of Studying Immigration

Definition and Overview of Immigration in Biology

Immigration in biology refers to the movement of individuals or groups of organisms into a population or habitat from another area. In ecological and population biology, immigration is one of the key processes—alongside birth, death, and emigration—that determines the size, composition, and genetic diversity of populations. Unlike human immigration, biological immigration is driven by natural behaviors, environmental cues, or random events rather than conscious decisions. The study of immigration in biology helps scientists understand how populations grow, adapt, and interact with their environment. This process plays a pivotal role in shaping community structure, species distribution, and the overall functioning of ecosystems.

Mechanisms and Factors Influencing Immigration

Natural Mechanisms Driving Immigration

Immigration in biology occurs through various natural mechanisms. Dispersal is a primary method, where organisms move from their birthplace to new habitats. This movement can be passive, such as seeds carried by the wind, or active, like animals walking, flying, or swimming to new territories. Seasonal migrations, such as those seen in birds and fish, are significant examples of large-scale immigration events. Additionally, changes in habitat, availability of resources, or population pressures can trigger organisms to seek new areas.

Key Factors Affecting Immigration Rates

Several factors influence the rate and success of immigration in biological populations. These include:

- Geographical barriers (mountains, rivers, oceans)

- Availability and quality of habitat
- Population density in both source and destination areas
- Climate and environmental conditions
- Human activities (urbanization, deforestation, habitat fragmentation)
- Presence of predators or competitors
- Genetic factors and reproductive strategies

Understanding these factors helps ecologists predict immigration patterns and their consequences for ecosystems.

Ecological Impacts of Immigration

Population Dynamics

Immigration in biology significantly affects population dynamics. When new individuals enter a population, they can increase its size, alter age structures, and influence the balance between births and deaths. Immigration can rescue declining populations, a phenomenon known as the "rescue effect," by introducing new genetic material and increasing reproductive potential. High immigration rates may also lead to overpopulation, increased competition for resources, and shifts in community interactions.

Community Structure and Biodiversity

The arrival of new species or individuals through immigration alters community structure and enhances biodiversity. Immigration introduces new genetic and species diversity, which can strengthen ecosystem resilience and stability. However, it may also disrupt established relationships, lead to the displacement of native species, or even cause invasive species problems if the newcomers outcompete local organisms.

Role in Ecosystem Functioning

Immigration in biology contributes to ecosystem processes such as nutrient cycling, pollination, and food web dynamics. Newly arrived species can fill ecological niches, provide new functions, or change the flow of energy within ecosystems. The continuous movement of organisms between habitats maintains healthy ecosystem functioning and supports adaptation to changing environmental conditions.

Evolutionary Consequences of Immigration

Genetic Diversity and Gene Flow

Immigration is a critical mechanism for gene flow in biological populations. The movement of individuals between populations introduces new genetic material, which increases genetic variability and reduces the risk of inbreeding depression. Gene flow resulting from immigration enhances the adaptive potential of populations, allowing them to respond better to environmental changes, diseases, and other pressures.

Speciation and Hybridization

Immigration can influence evolutionary processes such as speciation and hybridization. When immigrants from different populations interbreed, they may produce hybrids with unique genetic combinations. In some cases, this can lead to the emergence of new species or subspecies. Conversely, repeated immigration and gene flow may prevent populations from diverging genetically, thus inhibiting speciation.

Adaptation and Local Evolution

The introduction of new genetic traits through immigration can accelerate adaptation to local environmental conditions. For example, if immigrants carry genes conferring resistance to a local disease or tolerance to a specific climate, these traits may spread quickly within the population. Over time, immigration-driven adaptation shapes the evolutionary trajectory of species and communities.

Examples of Immigration in Biological Systems

Animal Immigration in Natural Ecosystems

Many animal populations rely on immigration for survival and expansion. For example, wolves reintroduced to Yellowstone National Park showed increased immigration from neighboring regions, which enhanced genetic diversity and stabilized the population. Similarly, migratory birds regularly immigrate to breeding and wintering grounds, impacting local ecosystem dynamics.

Plant Immigration and Dispersal Strategies

Plants utilize various dispersal strategies to achieve immigration. Wind, water, animals, and human activities transport seeds and pollen across landscapes, allowing plants to colonize new habitats. The spread of invasive plant species often illustrates the rapid and sometimes problematic effects of plant immigration on local ecosystems.

Microbial and Aquatic Immigration

Microorganisms and aquatic species also exhibit significant immigration patterns. Ocean currents can transport plankton and larvae across vast distances, leading to the establishment of new populations in different marine environments. In freshwater systems, fish species may immigrate through river connections, sometimes resulting in hybridization or altered community structures.

Modern Applications and Importance of Studying Immigration

Conservation Biology and Management

Studying immigration in biology is essential for conservation efforts. Conservationists use knowledge of immigration to design wildlife corridors, manage endangered species, and restore habitats. Facilitating immigration can help bolster declining populations and maintain ecosystem health. Conversely, managing unwanted immigration—such as invasive species—is crucial to protecting native biodiversity.

Predicting and Mitigating Invasive Species

Understanding the mechanisms and impacts of immigration aids in predicting the spread of invasive

species. By monitoring pathways and environmental conditions that promote immigration, scientists and policymakers can implement strategies to prevent or control biological invasions, safeguarding ecosystems and economic interests.

Implications for Climate Change Adaptation

Climate change is altering the distribution and movement of species worldwide. Immigration allows organisms to track suitable habitats as environmental conditions shift. Studying immigration patterns helps forecast species' responses to climate change and informs adaptive management approaches.

Research, Monitoring, and Ecological Restoration

Ongoing research into immigration in biology provides insights into population genetics, community ecology, and evolutionary biology. Monitoring immigration rates and patterns is vital for detecting ecological changes, assessing the success of restoration projects, and informing policy decisions.

- Immigration in biology shapes population size, genetic diversity, and species distributions.
- It influences ecological interactions, evolutionary processes, and ecosystem services.
- Understanding immigration is fundamental for conservation, managing invasive species, and adapting to environmental change.

Questions and Answers about Immigration in Biology

Q: What is immigration in biology?

A: Immigration in biology is the movement of individuals or groups of organisms into a population or habitat from another area, influencing population size, genetic diversity, and ecosystem dynamics.

Q: How does immigration affect genetic diversity in populations?

A: Immigration introduces new genetic material into populations, increasing genetic diversity and enhancing the ability of populations to adapt to environmental changes.

Q: What are some natural mechanisms that drive immigration in biology?

A: Natural mechanisms include dispersal by animals, wind, or water, seasonal migrations, and responses to resource availability or environmental pressures.

Q: Why is immigration important for conservation biology?

A: Immigration helps maintain healthy populations, restores declining populations, supports ecosystem resilience, and plays a role in the management of endangered species and invasive species control.

Q: Can immigration lead to the emergence of new species?

A: Yes, immigration can result in hybridization and, under certain conditions, contribute to the formation of new species or subspecies through gene mixing and adaptation.

Q: How does human activity influence immigration in biological systems?

A: Human activities such as habitat fragmentation, urban development, and global trade can facilitate or hinder immigration, sometimes leading to the spread of invasive species or isolated populations.

Q: What role does immigration play in ecosystem functioning?

A: Immigration introduces new organisms that can fill ecological niches, support food webs, and contribute to processes like pollination and nutrient cycling, maintaining ecosystem health.

Q: How do ecologists measure immigration rates in populations?

A: Ecologists use methods like mark-recapture studies, genetic analysis, and tracking technologies to estimate the number and origins of immigrants in biological populations.

Q: What challenges are associated with managing immigration in conservation?

A: Challenges include balancing the need to increase genetic diversity with the risk of introducing invasive species, as well as predicting and controlling unintended ecological impacts.

Q: How does climate change impact immigration patterns in biology?

A: Climate change alters habitats and resource availability, prompting species to immigrate to new areas where conditions are more suitable for their survival and reproduction.

Immigration In Biology

Find other PDF articles:

<https://fc1.getfilecloud.com/t5-goramblers-04/Book?docid=etj03-5435&title=examen-de-manejo-ohio-2023.pdf>

Immigration in Biology: A Deep Dive into Species Movement and Ecosystem Impact

Introduction:

The term "immigration" often evokes images of human migration and its societal impacts. However, the concept of immigration holds significant weight in the biological sciences, encompassing the movement of species across geographical boundaries and its profound consequences for ecosystems. This post explores the multifaceted world of immigration in biology, examining its mechanisms, ecological effects, and the critical role it plays in shaping biodiversity. We'll delve into the driving forces behind species immigration, the challenges faced by immigrant species, and the ultimate impact on the recipient ecosystems. Get ready to explore the fascinating dynamics of biological immigration!

H2: Mechanisms of Species Immigration

Species immigration isn't a random event; it's a complex process driven by several factors.

H3: Natural Dispersal:

Many species possess inherent dispersal mechanisms enabling them to move across landscapes. Birds, for example, can migrate vast distances, carrying seeds and spores with them. Similarly, wind-dispersed seeds and pollen can travel hundreds of kilometers, effectively "immigrating" to new locations. Aquatic organisms utilize currents and tides for dispersal, contributing to biogeographic patterns across oceans and rivers.

H3: Human-Mediated Immigration:

Human activities have dramatically accelerated species immigration, both intentionally and unintentionally. The introduction of non-native species for agriculture, horticulture, or pet trade (e.g., the introduction of kudzu to the United States) represents intentional immigration. Unintentional immigration, however, is far more pervasive. Ballast water in ships, contaminated cargo, and accidental escapes from captivity all contribute to the global spread of invasive species, often with devastating consequences for native ecosystems.

H2: Ecological Impacts of Species Immigration

The arrival of new species can have far-reaching consequences on recipient ecosystems. These impacts can be positive, negative, or neutral, depending on a range of factors.

H3: Positive Impacts: Niche Creation and Biodiversity Enhancement:

In some cases, immigrant species can fill previously unoccupied niches, increasing overall biodiversity and ecosystem stability. They might introduce novel genetic material, enhancing the adaptability of existing populations. Certain plant species, for instance, can improve soil quality, benefiting native vegetation.

H3: Negative Impacts: Competition, Predation, and Disease:

However, the arrival of invasive species frequently leads to negative consequences. They can outcompete native species for resources, leading to population declines or even extinctions. Invasive predators can decimate native prey populations, disrupting established food webs. Furthermore, immigrant species can introduce novel diseases to which native populations lack immunity.

H3: Neutral Impacts: Minimal Ecological Effect:

Not all immigrant species have a significant impact. Some might find unsuitable habitats or fail to establish viable populations. Their presence might go largely unnoticed, resulting in a neutral impact on the ecosystem.

H2: Challenges Faced by Immigrant Species

Immigration is far from a guaranteed success. Immigrant species face numerous challenges when establishing themselves in a new environment.

H3: Environmental Barriers:

New habitats may lack suitable resources, like food or suitable nesting sites. Climatic conditions might be unfavorable, and the immigrant species might lack adaptations to cope with the new environment.

H3: Biological Barriers:

Competition from existing species, predation pressure from native predators, and the prevalence of novel diseases all pose significant hurdles for immigrant species. Their inability to adapt to local parasites and pathogens can also hinder their establishment.

H2: Studying Immigration in Biology: Tools and Techniques

Researchers use a variety of methods to study species immigration.

H3: Genetic Analysis:

Genetic tools can reveal the origin of immigrant species, identify relatedness to native populations, and track the spread of introduced species over time.

H3: Ecological Monitoring:

Long-term monitoring programs provide invaluable data on the population dynamics of immigrant species and their effects on native communities.

H3: Modelling:

Mathematical models can predict the potential impact of future immigration events, aiding in the development of effective management strategies.

Conclusion:

Immigration in biology is a dynamic and multifaceted process with significant implications for biodiversity and ecosystem function. While some immigrant species contribute positively to ecosystem diversity, others can cause severe disruptions. Understanding the mechanisms, impacts, and challenges associated with species immigration is crucial for effective conservation and management strategies, particularly in the context of increasing global change and human-mediated species introductions. By utilizing a range of scientific tools and techniques, researchers continue to uncover the intricacies of biological immigration, furthering our ability to predict and manage its consequences.

FAQs:

1. What is the difference between immigration and invasion in biology? While both involve the arrival of species into a new area, "invasion" typically implies a negative impact on the recipient ecosystem, whereas "immigration" is a more neutral term.
2. How can we prevent harmful species immigration? Strict biosecurity measures, such as thorough inspections of cargo and ballast water treatment, are crucial. Early detection and rapid response programs are also vital for managing invasive species.
3. What are some examples of successful immigrant species? Certain plant species introduced for agriculture have adapted well and become integrated parts of the ecosystem without causing significant harm.
4. How does climate change influence species immigration? Climate change is altering species distributions, creating opportunities for some species to immigrate into previously unsuitable areas while threatening others.
5. What is the role of citizen science in studying immigration? Citizen scientists can play a valuable role in monitoring species distributions and reporting sightings of potentially invasive species, augmenting the efforts of professional researchers.

immigration in biology: Migration : The Biology of Life on the Move Davis Hugh Dingle
Professor in the Department of Entomology and Center for Population Biology University of California, 1996-01-18 Migration is one of the most fascinating and dramatic of all animal behaviors. Historically, however, the study of migration has been fragmented, with ornithologists, entomologists, and marine biologists paying little attention to work outside their own fields. This

treatment of the subject shows how comparisons across taxa can in fact illuminate migratory life cycles and the relation of migration to other movements. The book thus takes an integrated ecological perspective, focusing on migration as a biological phenomenon. The work is divided into four parts, each with a brief introductory section. Part I defines migration, gives examples, and places migration in the spectrum of movement behaviors, concluding with a chapter on methods for its study. Part II focuses on proximate mechanisms, including physiology and morphology (and the constraints associated with them), the interactions between migration and wind and current patterns, and the various orientation and navigation mechanisms by which migrants find their way about. Part III on the evolution of migratory life histories addresses the evolutionary and ecological basis for migration and the roles of migration not only in the lives of organisms, but also in the ecological communities in which they live. Part IV is devoted to a brief consideration of migration and its relation to pest management and conservation. As a major contribution to a vital subject, this work will be valued by all researchers and students in the field of animal behavior, ecology, and zoology.

immigration in biology: Population Biology of Plant Pathogens , 2015

immigration in biology: Biological Aspects of Human Migration C. G. Nicholas Mascie-Taylor, Gabriel W. Lasker, 1988-01-29 An examination of migration as an important cause of change in the genetic and demographic structure of human populations.

immigration in biology: Migration Hugh Dingle, 2014 Migration, broadly defined as directional movement to take advantage of spatially distributed resources, is a dramatic behaviour and an important component of many life histories that can contribute to the fundamental structuring of ecosystems. In recent years, our understanding of migration has advanced radically with respect to both new data and conceptual understanding. It is now almost twenty years since publication of the first edition, and an authoritative and up-to-date sequel that provides a taxonomically comprehensive overview of the latest research is therefore timely. The emphasis throughout this advanced textbook is on the definition and description of migratory behaviour, its ecological outcomes for individuals, populations, and communities, and how these outcomes lead to natural selection acting on the behaviour to cause its evolution. It takes a truly integrative approach, showing how comparisons across a diversity of organisms and biological disciplines can illuminate migratory life cycles, their evolution, and the relation of migration to other movements. *Migration: The Biology of Life on the Move* focuses on migration as a behavioural phenomenon with important ecological consequences for organisms as diverse as aphids, butterflies, birds and whales. It is suitable for senior undergraduate and graduate level students taking courses in behaviour, spatial ecology, 'movement ecology', and conservation. It will also be of interest and use to a broader audience of professional ecologists and behaviourists seeking an authoritative overview of this rapidly expanding field.

immigration in biology: The Theory of Island Biogeography Robert H. MacArthur, Edward O. Wilson, 2001 Population theory.

immigration in biology: Activist Biology Regina Horta Duarte, 2016-11-15 *Activist Biology* is the story of a group of biologists at the National Museum in Rio de Janeiro who joined the drive to renew the Brazilian nation, claiming as their weapon the voice of their fledgling field. It offers a portrait of science as a creative and transformative pathway. This book will intrigue anyone fascinated by environmental history and Latin American political and social life in the 1920s and 1930s.

immigration in biology: Biotic Borders Jeannie N. Shinozuka, 2022-04-20 This timely book reveals how the increase in traffic of transpacific plants, insects, and peoples raised fears of a biological yellow peril beginning in the late nineteenth century, when mass quantities of nursery stock and other agricultural products were shipped from large, corporate nurseries in Japan to meet the growing demand for exotics in the United States. Jeannie Shinozuka marshals extensive research to explain how the categories of native and invasive defined groups as bio-invasions that must be regulated-or somehow annihilated-during a period of American empire-building. Shinozuka shows

how the modern fixation on foreign species provided a linguistic and conceptual arsenal for anti-immigration movements that gained ground in the early twentieth century. Xenophobia fed concerns about biodiversity, and in turn facilitated the implementation of plant quarantine measures while also valuing, and devaluing, certain species over others. The emergence and rise of economic entomology and plant pathology alongside public health and anti-immigration movements was not merely coincidental. Ultimately, what this book unearths is that the inhumane and unjust incarceration of Japanese Americans during World War II cannot, and should not, be disentangled from this longer history--

immigration in biology: *The Next Great Migration* Sonia Shah, 2020-06-11 'A dazzlingly original picture of our relentlessly mobile species' NAOMI KLEIN 'Fascinating . . . Likely to prove prophetic in the coming months and years' OBSERVER 'A dazzling tour through 300 years of scientific history' PROSPECT 'A hugely entertaining, life-affirming and hopeful hymn to the glorious adaptability of life on earth' SCOTSMAN _____ We are surrounded by stories of people on the move. Wild species, too, are escaping warming seas and desiccated lands in a mass exodus. Politicians and the media present this upheaval of migration patterns as unprecedented, blaming it for the spread of disease and conflict, and spreading anxiety across the world as a result. But the science and history of migration in animals, plants, and humans tell a different story. Far from being a disruptive behaviour, migration is an ancient and lifesaving response to environmental change, a biological imperative as necessary as breathing. Climate changes triggered the first human migrations out of Africa. Falling sea levels allowed our passage across the Bering Sea. Unhampered by borders, migration allowed our ancestors to people the planet, into the highest reaches of the Himalayan Mountains and the most remote islands of the Pacific, disseminating the biological, cultural and social diversity that ecosystems and societies depend upon. In other words, migration is not the crisis - it is the solution. _____ Tracking the history of misinformation from the 18th century through to today's anti-immigration policies, *The Next Great Migration* makes the case for a future in which migration is not a source of fear, but of hope.

immigration in biology: Conceptual Ecology and Invasion Biology: Reciprocal Approaches to Nature Marc W. Cadotte, Sean M. McMahon, Tadashi Fukami, 2006-07-19 In this edited volume, global experts in ecology and evolutionary biology explore how theories in ecology elucidate the processes of invasion, while also examining how specific invasions inform ecological theory. This reciprocal benefit is highlighted in a number of scales of organization: population, community and biogeographic. The text describes example invaders in all major groups of organisms and from a number of regions around the globe.

immigration in biology: *Origins and Destinations* Renee Luthra, Roger Waldinger, Thomas Soehl, 2018-10-25 The children of immigrants continue a journey begun by their parents. Born or raised in the United States, this second generation now stands over 20 million strong. In this insightful new book, immigration scholars Renee Luthra, Thomas Soehl, and Roger Waldinger provide a fresh understanding the making of the second generation, bringing both their origins and destinations into view. Using surveys of second generation immigrant adults in New York and Los Angeles, *Origins and Destinations* explains why second generation experiences differ across national origin groups and why immigrant offspring with the same national background often follow different trajectories. Inter-group disparities stem from contexts of both emigration and immigration. Origin countries differ in value orientations: immigrant parents transmit lessons learned in varying contexts of emigration to children raised in the U.S. A system of migration control sifts immigrants by legal status, generating a context of immigration that favors some groups over others. Both contexts matter: schooling is higher among immigrant children from more secular societies (South Korea) than among those from more religious countries (the Philippines). When immigrant groups enter the U.S. migration system through a welcoming door, as opposed to one that makes authorized status difficult to achieve, education propels immigrant children to better jobs. Diversity is also evident among immigrant offspring whose parents stem from the same place. Immigrant children grow up with homeland connections, which can both hurt and harm: immigrant offspring get less schooling

when a parent lives abroad, but more schooling if parents in the U.S. send money to relatives living abroad. Though all immigrants enter the U.S. as non-citizens, some instantly enjoy legal status, while others spend years in the shadows. Children born abroad, but raised in the U.S. are all everyday Americans, but only some have become de jure Americans, a difference yielding across-the-board positive effects, even among those who started out in the same country. Disentangling the sources of diversity among today's population of immigrant offspring, *Origins and Destinations* provides a compelling new framework for understanding the second generation that is transforming America.

immigration in biology: *The Economic and Fiscal Consequences of Immigration* National Academies of Sciences, Engineering, and Medicine, Division of Behavioral and Social Sciences and Education, Committee on National Statistics, Panel on the Economic and Fiscal Consequences of Immigration, 2017-07-13 *The Economic and Fiscal Consequences of Immigration* finds that the long-term impact of immigration on the wages and employment of native-born workers overall is very small, and that any negative impacts are most likely to be found for prior immigrants or native-born high school dropouts. First-generation immigrants are more costly to governments than are the native-born, but the second generation are among the strongest fiscal and economic contributors in the U.S. This report concludes that immigration has an overall positive impact on long-run economic growth in the U.S. More than 40 million people living in the United States were born in other countries, and almost an equal number have at least one foreign-born parent. Together, the first generation (foreign-born) and second generation (children of the foreign-born) comprise almost one in four Americans. It comes as little surprise, then, that many U.S. residents view immigration as a major policy issue facing the nation. Not only does immigration affect the environment in which everyone lives, learns, and works, but it also interacts with nearly every policy area of concern, from jobs and the economy, education, and health care, to federal, state, and local government budgets. The changing patterns of immigration and the evolving consequences for American society, institutions, and the economy continue to fuel public policy debate that plays out at the national, state, and local levels. *The Economic and Fiscal Consequences of Immigration* assesses the impact of dynamic immigration processes on economic and fiscal outcomes for the United States, a major destination of world population movements. This report will be a fundamental resource for policy makers and law makers at the federal, state, and local levels but extends to the general public, nongovernmental organizations, the business community, educational institutions, and the research community.

immigration in biology: Migration Hugh Dingle, 1996 Migration is one of the most fascinating and dramatic of all animal behaviors. Historically, however, the study of migration has been fragmented, with ornithologists, entomologists, and marine biologists paying little attention to work outside their own fields. This treatment of the subject shows how comparisons across taxa can in fact illuminate migratory life cycles and the relation of migration to other movements. The book thus takes an integrated ecological perspective, focusing on migration as a biological phenomenon. The work is divided into four parts, each with a brief introductory section. Part I defines migration, gives examples, and places migration in the spectrum of movement behaviors, concluding with a chapter on methods for its study. Part II focuses on proximate mechanisms, including physiology and morphology (and the constraints associated with them), the interactions between migration and wind and current patterns, and the various orientation and navigation mechanisms by which migrants find their way about. Part III on the evolution of migratory life histories addresses the evolutionary and ecological basis for migration and the roles of migration not only in the lives of organisms, but also in the ecological communities in which they live. Part IV is devoted to a brief consideration of migration and its relation to pest management and conservation. As a major contribution to a vital subject, this work will be valued by all researchers and students in the field of animal behavior, ecology, and zoology.

immigration in biology: Migration : The Biology of Life on the Move Davis Hugh Dingle Professor in the Department of Entomology and Center for Population Biology University of

California, 1996-01-18 Migration is one of the most fascinating and dramatic of all animal behaviors. Historically, however, the study of migration has been fragmented, with ornithologists, entomologists, and marine biologists paying little attention to work outside their own fields. This treatment of the subject shows how comparisons across taxa can in fact illuminate migratory life cycles and the relation of migration to other movements. The book thus takes an integrated ecological perspective, focusing on migration as a biological phenomenon. The work is divided into four parts, each with a brief introductory section. Part I defines migration, gives examples, and places migration in the spectrum of movement behaviors, concluding with a chapter on methods for its study. Part II focuses on proximate mechanisms, including physiology and morphology (and the constraints associated with them), the interactions between migration and wind and current patterns, and the various orientation and navigation mechanisms by which migrants find their way about. Part III on the evolution of migratory life histories addresses the evolutionary and ecological basis for migration and the roles of migration not only in the lives of organisms, but also in the ecological communities in which they live. Part IV is devoted to a brief consideration of migration and its relation to pest management and conservation. As a major contribution to a vital subject, this work will be valued by all researchers and students in the field of animal behavior, ecology, and zoology.

immigration in biology: *Animal Migration* E.J. Milner-Gulland, John M. Fryxell, Anthony R.E. Sinclair, 2011-01-13 Migration is a fascinating phenomenon that can contribute to the fundamental structuring of ecosystems. This seminal volume synthesises insights from both mathematical modelling and empirical research in order to generate a unified understanding of the mechanisms underlying migration.

immigration in biology: The Theory of Island Biogeography Revisited Jonathan B. Losos, Robert E. Ricklefs, 2009-10-19 Robert H. MacArthur and Edward O. Wilson's *The Theory of Island Biogeography*, first published by Princeton in 1967, is one of the most influential books on ecology and evolution to appear in the past half century. By developing a general mathematical theory to explain a crucial ecological problem--the regulation of species diversity in island populations--the book transformed the science of biogeography and ecology as a whole. In *The Theory of Island Biogeography Revisited*, some of today's most prominent biologists assess the continuing impact of MacArthur and Wilson's book four decades after its publication. Following an opening chapter in which Wilson reflects on island biogeography in the 1960s, fifteen chapters evaluate and demonstrate how the field has extended and confirmed--as well as challenged and modified--MacArthur and Wilson's original ideas. Providing a broad picture of the fundamental ways in which the science of island biogeography has been shaped by MacArthur and Wilson's landmark work, *The Theory of Island Biogeography Revisited* also points the way toward exciting future research.

immigration in biology: *Marmot Biology* Kenneth B. Armitage, 2014-07-24 *Marmot Biology* Sociality, Individual Fitness and Population Dynamics--

immigration in biology: *The Flexible Phenotype* Theunis Piersma, Jan A. van Gils, 2011 In essence, the authors argue for the existence of direct, measurable, links between phenotype and ecology.

immigration in biology: Inheriting the City Philip Kasinitz, John H. Mollenkopf, Mary C. Waters, Jennifer Holdaway, 2009-12-11 The United States is an immigrant nation—nowhere is the truth of this statement more evident than in its major cities. Immigrants and their children comprise nearly three-fifths of New York City's population and even more of Miami and Los Angeles. But the United States is also a nation with entrenched racial divisions that are being complicated by the arrival of newcomers. While immigrant parents may often fear that their children will disappear into American mainstream society, leaving behind their ethnic ties, many experts fear that they won't—evolving instead into a permanent unassimilated and underemployed underclass. *Inheriting the City* confronts these fears with evidence, reporting the results of a major study examining the social, cultural, political, and economic lives of today's second generation in metropolitan New York,

and showing how they fare relative to their first-generation parents and native-stock counterparts. Focused on New York but providing lessons for metropolitan areas across the country, *Inheriting the City* is a comprehensive analysis of how mass immigration is transforming life in America's largest metropolitan area. The authors studied the young adult offspring of West Indian, Chinese, Dominican, South American, and Russian Jewish immigrants and compared them to blacks, whites, and Puerto Ricans with native-born parents. They find that today's second generation is generally faring better than their parents, with Chinese and Russian Jewish young adults achieving the greatest education and economic advancement, beyond their first-generation parents and even beyond their native-white peers. Every second-generation group is doing at least marginally—and, in many cases, significantly—better than natives of the same racial group across several domains of life. Economically, each second-generation group earns as much or more than its native-born comparison group, especially African Americans and Puerto Ricans, who experience the most persistent disadvantage. *Inheriting the City* shows the children of immigrants can often take advantage of policies and programs that were designed for native-born minorities in the wake of the civil rights era. Indeed, the ability to choose elements from both immigrant and native-born cultures has produced, the authors argue, a second-generation advantage that catalyzes both upward mobility and an evolution of mainstream American culture. *Inheriting the City* leads the chorus of recent research indicating that we need not fear an immigrant underclass. Although racial discrimination and economic exclusion persist to varying degrees across all the groups studied, this absorbing book shows that the new generation is also beginning to ease the intransigence of U.S. racial categories. Adapting elements from their parents' cultures as well as from their native-born peers, the children of immigrants are not only transforming the American city but also what it means to be American.

immigration in biology: Traveling Cultures and Plants Andrea Pieroni, Ina Vandebroek, 2009-10 The tremendous increase in migrations and diasporas of human groups in the last decades are not only bringing along challenging issues for society, especially related to the economic and political management of multiculturalism and culturally effective health care, but they are also creating dramatic changes in traditional knowledge, beliefs and practices (KBP) related to (medicinal) plant use. The contributors to this volume – all internationally recognized scholars in the field of ethnobiology, transcultural pharmacy, and medical anthropology – analyze these dynamics of traditional knowledge in especially 12 selected case studies. Ina Vandebroek, features in Nova's Secret Life of Scientists, answering the question: just what is ethnobotany?

immigration in biology: *Modelling Biological Populations in Space and Time* Eric Renshaw, 1993-08-26 This volume develops a unifying approach to population studies, emphasising the interplay between modelling and experimentation. Throughout, mathematicians and biologists are provided with a framework within which population dynamics can be fully explored and understood. Aspects of population dynamics covered include birth-death and logistic processes, competition and predator-prey relationships, chaos, reaction time-delays, fluctuating environments, spatial systems, velocities of spread, epidemics, and spatial branching structures. Both deterministic and stochastic models are considered. Whilst the more theoretically orientated sections will appeal to mathematical biologists, the material is presented so that readers with little mathematical expertise can bypass these without losing the main flow of the text.

immigration in biology: Migration and Mental Health Dinesh Bhugra, Susham Gupta, 2010-12-02 Human migration is a global phenomenon and is on the increase. It occurs as a result of 'push' factors (asylum, natural disaster), or as a result of 'pull' factors (seeking economic or educational improvement). Whatever the cause of the relocation, the outcome requires individuals to adjust to their new surroundings and cope with the stresses involved, and as a result, there is considerable potential for disruption to mental health. This volume explores all aspects of migration, on all scales, and its effect on mental health. It covers migration in the widest sense and does not limit itself to refugee studies. It covers issues specific to the elderly and the young, as well as providing practical tips for clinicians on how to improve their own cultural competence in the work

setting. The book will be of interest to all mental health professionals and those involved in establishing health and social policy.

immigration in biology: Black Identities Mary C. WATERS, 2009-06-30 The story of West Indian immigrants to the United States is generally considered to be a great success. Mary Waters, however, tells a very different story. She finds that the values that gain first-generation immigrants initial success--a willingness to work hard, a lack of attention to racism, a desire for education, an incentive to save--are undermined by the realities of life and race relations in the United States. Contrary to long-held beliefs, Waters finds, those who resist Americanization are most likely to succeed economically, especially in the second generation.

immigration in biology: Tracking Animal Migration with Stable Isotopes , 2008-04-09 Tracking Animal Migration with Stable Isotopes provides a consolidated overview of the current knowledge of stable isotopes in terrestrial migration research questions. It offers ecologists and conservation biologists provide a practical handbook for those considering using stable isotopes in their migration research. - Presents information for readers to understand how to apply isotopic methods for tracking - Critical information on areas for future research - Practical guidelines and discussions of sample collection, sample preparation, and data analysis - Enhanced understanding of data and statistical analysis in isotope-based studies of migratory animals

immigration in biology: Gender and International Migration Katharine M. Donato, Donna Gabaccia, 2015-03-30 In 2006, the United Nations reported on the "feminization" of migration, noting that the number of female migrants had doubled over the last five decades. Likewise, global awareness of issues like human trafficking and the exploitation of immigrant domestic workers has increased attention to the gender makeup of migrants. But are women really more likely to migrate today than they were in earlier times? In *Gender and International Migration*, sociologist and demographer Katharine Donato and historian Donna Gabaccia evaluate the historical evidence to show that women have been a significant part of migration flows for centuries. The first scholarly analysis of gender and migration over the centuries, *Gender and International Migration* demonstrates that variation in the gender composition of migration reflect not only the movements of women relative to men, but larger shifts in immigration policies and gender relations in the changing global economy. While most research has focused on women migrants after 1960, Donato and Gabaccia begin their analysis with the fifteenth century, when European colonization and the transatlantic slave trade led to large-scale forced migration, including the transport of prisoners and indentured servants to the Americas and Australia from Africa and Europe. Contrary to the popular conception that most of these migrants were male, the authors show that a significant portion were women. The gender composition of migrants was driven by regional labor markets and local beliefs of the sending countries. For example, while coastal ports of western Africa traded mostly male slaves to Europeans, most slaves exiting east Africa for the Middle East were women due to this region's demand for female reproductive labor. Donato and Gabaccia show how the changing immigration policies of receiving countries affect the gender composition of global migration. Nineteenth-century immigration restrictions based on race, such as the Chinese Exclusion Act in the United States, limited male labor migration. But as these policies were replaced by regulated migration based on categories such as employment and marriage, the balance of men and women became more equal - both in large immigrant-receiving nations such as the United States, Canada, and Israel, and in nations with small immigrant populations such as South Africa, the Philippines, and Argentina. The gender composition of today's migrants reflects a much stronger demand for female labor than in the past. The authors conclude that gender imbalance in migration is most likely to occur when coercive systems of labor recruitment exist, whether in the slave trade of the early modern era or in recent guest-worker programs. Using methods and insights from history, gender studies, demography, and other social sciences, *Gender and International Migration* shows that feminization is better characterized as a gradual and ongoing shift toward gender balance in migrant populations worldwide. This groundbreaking demographic and historical analysis provides an important foundation for future migration research.

immigration in biology: American Perceptions of Immigrant and Invasive Species Peter Coates, 2006 Publisher description

immigration in biology: Immigration as a Social Determinant of Health National Academies of Sciences, Engineering, and Medicine, Health and Medicine Division, Board on Population Health and Public Health Practice, Roundtable on the Promotion of Health Equity, 2019-01-28 Since 1965 the foreign-born population of the United States has swelled from 9.6 million or 5 percent of the population to 45 million or 14 percent in 2015. Today, about one-quarter of the U.S. population consists of immigrants or the children of immigrants. Given the sizable representation of immigrants in the U.S. population, their health is a major influence on the health of the population as a whole. On average, immigrants are healthier than native-born Americans. Yet, immigrants also are subject to the systematic marginalization and discrimination that often lead to the creation of health disparities. To explore the link between immigration and health disparities, the Roundtable on the Promotion of Health Equity held a workshop in Oakland, California, on November 28, 2017. This summary of that workshop highlights the presentations and discussions of the workshop.

immigration in biology: *Insect Migration* V. Alistair Drake, A. Gavin Gatehouse, 1995-09-14 A comprehensive account of insect migration in its ecological and evolutionary context.

immigration in biology: *Immigration, Poverty, and Socioeconomic Inequality* David Card, Steven Raphael, 2013-07-31 The rapid rise in the proportion of foreign-born residents in the United States since the mid-1960s is one of the most important demographic events of the past fifty years. The increase in immigration, especially among the less-skilled and less-educated, has prompted fears that the newcomers may have depressed the wages and employment of the native-born, burdened state and local budgets, and slowed the U.S. economy as a whole. Would the poverty rate be lower in the absence of immigration? How does the undocumented status of an increasing segment of the foreign-born population impact wages in the United States? In *Immigration, Poverty, and Socioeconomic Inequality*, noted labor economists David Card and Steven Raphael and an interdisciplinary team of scholars provide a comprehensive assessment of the costs and benefits of the latest era of immigration to the United States. *Immigration, Poverty, and Socioeconomic Inequality* rigorously explores shifts in population trends, labor market competition, and socioeconomic segregation to investigate how the recent rise in immigration affects economic disadvantage in the United States. Giovanni Peri analyzes the changing skill composition of immigrants to the United States over the past two decades to assess their impact on the labor market outcomes of native-born workers. Despite concerns over labor market competition, he shows that the overall effect has been benign for most native groups. Moreover, immigration appears to have had negligible impacts on native poverty rates. Ethan Lewis examines whether differences in English proficiency explain this lack of competition between immigrant and native-born workers. He finds that parallel Spanish-speaking labor markets emerge in areas where Spanish speakers are sufficiently numerous, thereby limiting the impact of immigration on the wages of native-born residents. While the increase in the number of immigrants may not necessarily hurt the job prospects of native-born workers, low-skilled migration appears to suppress the wages of immigrants themselves. Michael Stoll shows that linguistic isolation and residential crowding in specific metropolitan areas has contributed to high poverty rates among immigrants. Have these economic disadvantages among low-skilled immigrants increased their dependence on the U.S. social safety net? Marianne Bitler and Hilary Hoynes analyze the consequences of welfare reform, which limited eligibility for major cash assistance programs. Their analysis documents sizable declines in program participation for foreign-born families since the 1990s and suggests that the safety net has become less effective in lowering child poverty among immigrant households. As the debate over immigration reform reemerges on the national agenda, *Immigration, Poverty, and Socioeconomic Inequality* provides a timely and authoritative review of the immigrant experience in the United States. With its wealth of data and intriguing hypotheses, the volume is an essential addition to the field of immigration studies. A Volume in the National Poverty Center Series on Poverty and Public Policy

immigration in biology: *Immigrants and Welfare* Michael E. Fix, 2009-11-25 The lore of the immigrant who comes to the United States to take advantage of our welfare system has a long history in America's collective mythology, but it has little basis in fact. The so-called problem of immigrants on the dole was nonetheless a major concern of the 1996 welfare reform law, the impact of which is still playing out today. While legal immigrants continue to pay taxes and are eligible for the draft, welfare reform has severely limited their access to government supports in times of crisis. Edited by Michael Fix, *Immigrants and Welfare* rigorously assesses the welfare reform law, questions whether its immigrant provisions were ever really necessary, and examines its impact on legal immigrants' ability to integrate into American society. *Immigrants and Welfare* draws on fields from demography and law to developmental psychology. The first part of the volume probes the politics behind the welfare reform law, its legal underpinnings, and what it may mean for integration policy. Contributor Ron Haskins makes a case for welfare reform's ultimate success but cautions that excluding noncitizen children (future workers) from benefits today will inevitably have serious repercussions for the American economy down the road. Michael Wishnie describes the implications of the law for equal protection of immigrants under the U.S. Constitution. The second part of the book focuses on empirical research regarding immigrants' propensity to use benefits before the law passed, and immigrants' use and hardship levels afterwards. Jennifer Van Hook and Frank Bean analyze immigrants' benefit use before the law was passed in order to address the contested sociological theories that immigrants are inclined to welfare use and that it slows their assimilation. Randy Capps, Michael Fix, and Everett Henderson track trends before and after welfare reform in legal immigrants' use of the major federal benefit programs affected by the law. Leighton Ku looks specifically at trends in food stamps and Medicaid use among noncitizen children and adults and documents the declining health insurance coverage of noncitizen parents and children. Finally, Ariel Kalil and Danielle Crosby use longitudinal data from Chicago to examine the health of children in immigrant families that left welfare. Even though few states took the federal government's invitation with the 1996 welfare reform law to completely freeze legal immigrants out of the social safety net, many of the law's most far-reaching provisions remain in place and have significant implications for immigrants. *Immigrants and Welfare* takes a balanced look at the politics and history of immigrant access to safety-net supports and the ongoing impacts of welfare. Copublished with the Migration Policy Institute

immigration in biology: *First Migrants* Peter Bellwood, 2014-01-13 The first publication to outline the complex global story of human migration and dispersal throughout the whole of human prehistory. Utilizing archaeological, linguistic and biological evidence, Peter Bellwood traces the journeys of the earliest hunter-gatherer and agriculturalist migrants as critical elements in the evolution of human lifeways. The first volume to chart global human migration and population dispersal throughout the whole of human prehistory, in all regions of the world An archaeological odyssey that details the initial spread of early humans out of Africa approximately two million years ago, through the Ice Ages, and down to the continental and island migrations of agricultural populations within the past 10,000 years Employs archaeological, linguistic and biological evidence to demonstrate how migration has always been a vital and complex element in explaining the evolution of the human species Outlines how significant migrations have affected population diversity in every region of the world Clarifies the importance of the development of agriculture as a migratory imperative in later prehistory Fully referenced with detailed maps throughout

immigration in biology: *Invasion Biology* Mark A. Davis, 2009-01-29 With the exception of climate change, biological invasions have probably received more attention during the past ten years than any other ecological topic. Yet this is the first synthetic, single-authored overview of the field since Williamson's 1996 book. Written fifty years after the publication of Elton's pioneering monograph on the subject, *Invasion Biology* provides a comprehensive and up-to-date review of the science of biological invasions while also offering new insights and perspectives relating to the processes of introduction, establishment, and spread. The book connects science with application by describing the health, economic, and ecological impacts of invasive species as well as the variety of

management strategies developed to mitigate harmful impacts. The author critically evaluates the approaches, findings, and controversies that have characterized invasion biology in recent years, and suggests a variety of future research directions. Carefully balanced to avoid distinct taxonomic, ecosystem, and geographic (both investigator and species) biases, the book addresses a wide range of invasive species (including protists, invertebrates, vertebrates, fungi, and plants) which have been studied in marine, freshwater, and terrestrial environments throughout the world by investigators equally diverse in their origins. This accessible and thought-provoking text will be of particular interest to graduate level students and established researchers in the fields of invasion biology, community ecology, conservation biology, and restoration ecology. It will also be of value and use to land managers, policy makers, and other professionals charged with controlling the negative impacts associated with recently arrived species.

immigration in biology: *The Economic Sociology of Immigration* Alejandro Portes, 1995-06-22 Portes suggests that immigration constitutes an especially appropriate Mertonian 'strategic research site' for economic sociology in that it provides very good opportunities for investigating the embeddedness of economic relationships in social situations....the contributors expand the conventional domain of economic sociology quite literally in both time and space.—Contemporary Sociology Alejandro Portes and his splendid band of collaborators make clear that the causes, processes, and consequences of migration vary dramatically from group to group, that a group's history makes a profound difference to its fate in the American economy. They have produced a sinewy book, a book worth arguing with.—Charles Tilly, Columbia University *The Economic Sociology of Immigration* forges a dynamic link between the theoretical innovations of economic sociology with the latest empirical findings from immigration research, an area of critical concern as the problems of ethnic poverty and inequality become increasingly profound. Alejandro Portes' lucid overview of sociological approaches to economic phenomena provides the framework for six thoughtful, wide-ranging investigations into ethnic and immigrant labor networks and social resources, entrepreneurship, and cultural assimilation. Mark Granovetter illustrates how small businesses built on the bonds of ethnicity and kinship can, under certain conditions, flourish remarkably well. Bryan R. Roberts demonstrates how immigrant groups' expectations of the duration of their stay influence their propensity toward entrepreneurship. Ivan Light and Carolyn Rosenstein chart how specific metropolitan environments have stimulated or impeded entrepreneurial ventures in five ethnic populations. Saskia Sassen provides a revealing analysis of the unexpectedly flexible and vital labor market networks maintained between immigrants and their native countries, while M. Patricia Fernandez Kelly looks specifically at the black inner city to examine how insular cultural values hinder the acquisition of skills and jobs outside the neighborhood. Alejandro Portes also depicts the difference between the attitudes of American-born youths and those of recent immigrants and its effect on the economic success of immigrant children.

immigration in biology: *Animal Movement Across Scales* Lars-Anders Hansson, Susanne Åkesson, 2014 This study takes a broad and timely approach to animal movement across both temporal and spatial scales. Movement and migration on land, in the air, and in water are pervading features of animal life—from the smallest protozoans to the largest whales - and can extend from millimetres to global scale. Research into animal movement ecology is now entering a new era with the development of novel molecular, electronic, and technical methods that make it possible to analyse the movements of individual animals under complex environmental conditions that determine the evolution of movement habits.

immigration in biology: Immigrants and Boomers Dowell Myers, 2007-02-22 This story of hope for both immigrants and native-born Americans is a well-researched, insightful, and illuminating study that provides compelling evidence to support a policy of homegrown human investment as a new priority. A timely, valuable addition to demographic and immigration studies. Highly recommended. —Choice Virtually unnoticed in the contentious national debate over immigration is the significant demographic change about to occur as the first wave of the Baby Boom generation retires, slowly draining the workforce and straining the federal budget to the

breaking point. In this forward-looking new book, noted demographer Dowell Myers proposes a new way of thinking about the influx of immigrants and the impending retirement of the Baby Boomers. Myers argues that each of these two powerful demographic shifts may hold the keys to resolving the problems presented by the other. *Immigrants and Boomers* looks to California as a bellwether state—where whites are no longer a majority of the population and represent just a third of residents under age twenty—to afford us a glimpse into the future impact of immigration on the rest of the nation. Myers opens with an examination of the roots of voter resistance to providing social services for immigrants. Drawing on detailed census data, Myers demonstrates that long-established immigrants have been far more successful than the public believes. Among the Latinos who make up the bulk of California's immigrant population, those who have lived in California for over a decade show high levels of social mobility and use of English, and 50 percent of Latino immigrants become homeowners after twenty years. The impressive progress made by immigrant families suggests they have the potential to pick up the slack from aging boomers over the next two decades. The mass retirement of the boomers will leave critical shortages in the educated workforce, while shrinking ranks of middle-class tax payers and driving up entitlement expenditures. In addition, as retirees sell off their housing assets, the prospect of a generational collapse in housing prices looms. Myers suggests that it is in the boomers' best interest to invest in the education and integration of immigrants and their children today in order to bolster the ranks of workers, taxpayers, and homeowners America they will depend on ten and twenty years from now. In this compelling, optimistic book, Myers calls for a new social contract between the older and younger generations, based on their mutual interests and the moral responsibility of each generation to provide for children and the elderly. Combining a rich scholarly perspective with keen insight into contemporary political dilemmas, *Immigrants and Boomers* creates a new framework for understanding the demographic challenges facing America and forging a national consensus to address them.

immigration in biology: *Bird Migration* Peter Berthold, 2001 Ten years have passed since the first edition of this book. During that time the field of bird migration has experienced many advances which are reflected in this second edition. No other book exists to bring together the vast amount of information currently available on the subject of bird migration. Includes discussion of evolution and history of bird migration, physiology, orientation mechanisms and threats to migrations and is accessible to experts as well as amateurs.

immigration in biology: *The New Americans* Panel on the Demographic and Economic Impacts of Immigration, Committee on Population, Division of Behavioral and Social Sciences and Education, National Research Council, 1997-10-28 This book sheds light on one of the most controversial issues of the decade. It identifies the economic gains and losses from immigration--for the nation, states, and local areas--and provides a foundation for public discussion and policymaking. Three key questions are explored: What is the influence of immigration on the overall economy, especially national and regional labor markets? What are the overall effects of immigration on federal, state, and local government budgets? What effects will immigration have on the future size and makeup of the nation's population over the next 50 years? *The New Americans* examines what immigrants gain by coming to the United States and what they contribute to the country, the skills of immigrants and those of native-born Americans, the experiences of immigrant women and other groups, and much more. It offers examples of how to measure the impact of immigration on government revenues and expenditures--estimating one year's fiscal impact in California, New Jersey, and the United States and projecting the long-run fiscal effects on government revenues and expenditures. Also included is background information on immigration policies and practices and data on where immigrants come from, what they do in America, and how they will change the nation's social fabric in the decades to come.

immigration in biology: *Holding Fast* James A. McCann, Michael Jones-Correa, 2020-10-08 The fight over immigration reform and immigrants' rights in the U.S. has been marked by sharp swings in both public sentiment and official enforcement. In 2006, millions of Latino immigrants joined protests for immigration reform. Deferred Action for Childhood Arrivals, a policy granting

work permits and protection from deportation to undocumented immigrants who entered the country before age 16, was enacted in 2012, despite a sharp increase in deportations during the Bush and Obama administrations. The 2016 election of Donald J. Trump prompted a surge in anti-immigrant sentiment which threatened DACA and other progressive immigration policies. In *Holding Fast*, political scientists James McCann and Michael Jones-Correa investigate whether and how these recent shifts have affected political attitudes and civic participation among Latino immigrants. *Holding Fast* draws largely from a yearlong survey of Latino immigrants, including both citizens and noncitizens, conducted before and after the 2016 election. The survey gauges immigrants' attitudes about the direction of the country and the emotional underpinnings of their political involvement. While survey respondents expressed pessimism about the direction of the United States following the 2016 election, there was no evidence of their withdrawal from civic life. Instead, immigrants demonstrated remarkable resilience in their political engagement, and their ties to America remained robust. McCann and Jones-Correa examine Latino immigrants' trust in government as well as their economic concerns and fears surrounding possible deportations of family members and friends. They find that Latino immigrants who were concerned about the likelihood of deportation were more likely to express a lack of trust in government. Concerns about personal finances were less salient. Disenchantment with the U.S. government did not differ based on citizenship status, length of stay in America, or residence in immigrant-friendly states. Foreign-born Latinos who are naturalized citizens shared similar sentiments to those with fewer political rights, and immigrants in California, for example, express views similar to those in Texas. Addressing the potential influence immigrant voters may wield in the coming election, the authors point to signs that the turnout rate for naturalized Latino immigrant may be higher than that for Latinos born in the United States. The authors further underscore the importance of the parties' platforms and policies, noting the still-tenuous nature of Latino immigrants' affiliations with the Democratic Party. *Holding Fast* outlines the complex political situation in which Latino immigrants find themselves today. Despite well-founded feelings of anger, fear, and skepticism, in general they maintain an abiding faith in the promise of American democracy. This book provides a comprehensive account of Latino immigrants' political opinions and a nuanced, thoughtful outlook on the future of Latino civic participation. It will be an important contribution to scholarly work on civic engagement and immigrant integration.

immigration in biology: Circannual Rhythms Eberhard Gwinner, 2012-12-06 In addition to the more or less static properties of the environment, plants and animals must cope with its temporal variations. Among the most conspicuous temporal changes to which organisms are exposed are periodic phenomena generated by the rotation of the earth about its axis, its revolution around the sun, and the more complex movements of the moon in relation to both sun and earth. The first two of these astronomical cycles are basic to the familiar daily and annual rhythms, respectively, in the environment. The third generates somewhat more complex cycles, such as those in moonlight and variations in tides. These environmental cycles have provided challenges and opportunities for organisms to adjust their physiology and behavior to them. Indeed, the predictability inherent to these periodic processes has enabled organisms to evolve innate endogenous rhythmic programs that match the environmental cycles and allow, in a variety of different ways, adjustment of biological activities to the cycles of environmental changes. The endogenous nature of rhythmicity was first clearly recognized in the 1930's in daily periodicities, the most widely distributed and best investigated class of biological rhythms of this type. In the 1950's, demonstrations of endogenous tidal and lunar rhythms, which occur in some littoral and marine organisms, ensued. Another decade passed before endogenous annual periodicities were first demonstrated unambiguously.

immigration in biology: Vector Biology, Ecology and Control Peter W. Atkinson, 2009-12-12 Mir S. Mulla joined the faculty of the Entomology Department at the University of California, Riverside in 1956, only two years after the Riverside campus was established as an independent campus within the University of California system. Prior to his appointment, Mir received his B.S. from Cornell University and then moved to the University of California, Berkeley to

pursue his graduate studies. His Ph.D. from Berkeley, awarded in 1955, completed his formal American education which was the purpose of his immigration from his native Kandahar in Afghanistan. In his over 50 years at Riverside, Mir has made an incalculable impact on vector biology both within the United States and in developing countries throughout the world. Within Southern California, Mir's basic and applied research led to the rapid and sustainable control of mosquitoes and eye gnats in the Coachella Valley and so directly enabled this region to grow to the thriving, large community it is today. In 2006 his efforts in facilitating the development of the low desert of southern California were recognized through the dedication of the Mir S. Mulla Biological Control Facility by the Coachella Valley Mosquito and Vector Control District. His success has been so profound that it remains somewhat cryptic to the many who now reside in, visit, and enjoy, this region of California, oblivious to the insect problems that severely restrained development until Mir and his students first applied their expertise many decades ago.

immigration in biology: Insect Ecology Timothy D. Schowalter, 2006-02-27 Dr. Timothy Schowalter has succeeded in creating a unique, updated treatment of insect ecology. This revised and expanded text looks at how insects adapt to environmental conditions while maintaining the ability to substantially alter their environment. It covers a range of topics- from individual insects that respond to local changes in the environment and affect resource distribution, to entire insect communities that have the capacity to modify ecosystem conditions. Insect Ecology, Second Edition, synthesizes the latest research in the field and has been produced in full color throughout. It is ideal for students in both entomology and ecology-focused programs. NEW TO THIS EDITION:* New topics such as elemental defense by plants, chaotic models, molecular methods to measure dispersion, food web relationships, and more* Expanded sections on plant defenses, insect learning, evolutionary tradeoffs, conservation biology and more* Includes more than 350 new references* More than 40 new full-color figures

Back to Home: <https://fc1.getfilecloud.com>