

## Alien Fish Species In The Eastern Mediterranean Sea

The book is divided into two sections and represents the current trend of research in aquatic bioresource. In the section "Biology, Ecology and Physiological Chemistry", high-impact articles are contributed on reproduction, population genetics, evolution, biodiversity, biology and ecology of different aquatic faunas. Physiological chemistry of lipid, bioactive pharmaceuticals and chemical ecological aspects of aquatic organisms were discussed. In the section entitled "Conservation and Sustainable Management", authors highlighted conservation- and management-related issues of various bioresources in different regions of the earth. The book mentions the biological, ecological, physiological and genetic significance of aquatic organisms with resource potential. The authors stressed on rational utilization and management of bioresource ensuring minimal damage of the aquatic ecosystem. This book would provide a direction towards sustainable ecological management of bioresource.

The global scale of alien species invasions is becoming more and more evident in the beginning of the new millennium. Though the problem (biological invasions became a rapidly growing research area, there are large gaps still, both geographically and the mainly, to be filled in the near future. This book is the first attempt to provide an overall picture of aquatic species invasions in Europe. Its geographical scope stretches from Irish waters in the west to Volga River and the Caspian Sea in the east, and from Mediterranean in the south up to the Arctic coast of Europe. Not all parts of the continent could be equally covered, as in some countries species invasions are not studied at all. The book covers all major European aquatic systems on the broadest geographical and ecological scope possible, from fully saline seas, semi-enclosed brackish water bodies and coastal lagoons to freshwater lakes, major river systems and waterways. The key objectives include the present status and impacts caused by non-native aquatic species in European waters. Please note that lengthy species lists submitted for publication and additional informa tion were put on the Internet, as the electronic version of these tables benefits from computer assisted search for data (http://www. ka. tihenor/Eurosqadinvaders. htm). Altogether more than 100 scientists from 24 countries have joined to synthesize the available information on bioinvasions. However, the book does not claim to be fully comprehensive.

The introduction of alien species can upset ecosystems and have been identified as the second main cause of species extinction at a global level after habitat loss or deterioration. This publication sets up a European strategy to address this issue, developed in the framework of the Bern Convention and in line with guidelines adopted in 2002 on biological diversity. This strategy seeks to encourage the implementation of co-ordinated measures in all European states which are designed to prevent or minimise adverse impacts of non-native species on native biological diversity.

This book is the first attempt to provide an overall picture of aquatic species invasions in Europe. Its geographical scope stretches from Irish waters in the west to the Volga River and the Caspian Sea in the east, and from the Mediterranean Sea in the south up to the Arctic coast of Europe. Not all parts of the continent could be covered equally, as in some countries species invasions are not yet studied. The book represents the array of all major European aquatic systems in the broadest geographical and ecological scope possible, from fully saline seas, semi-enclosed brackish water bodies and coastal lagoons to freshwater lakes, major river systems and waterways. The key objectives include the present status and impacts on economy and environment caused by non-native aquatic species in European waters. Altogether more than 100 scientists from 24 countries have joined together to synthesize the available information on bio-invasions. Economic and Environmental Costs of Alien Plant, Animal, and Microbe Species

One Man's Adventures Hunting Invasive Animal Species

National Consultation on Alien Fish Species in Aquaculture and Aquarium Trade: Issues and Perspectives, Proceedings

A Celebratory Volume in Honour of Henri J. Dumont

Conservation Biology for All

Invasive Alien Species

This guide seeks to help by providing national law and policy makers with practical information and guidance for developing of strengthening legal and institutional frameworks on alien invasive species, consistent with Article 8(h) of the CBD, as well as pertinent obligations under other international instruments. It provides a structured framework for dealing with alien invasive species issues and contains illustrations and practical examples to assist in understanding their impact.

A total of 1,354 introductions of 237 species into 140 countries are analyses. The number of introductions carried out rose from the middle of the last century until the 1960s and have lessened since then.

Introduction of alien species constitutes worldwide one of the major threats to biodiversity, particularly in freshwater ecosystems. In France, the number of alien aquatic plant and animal species has increased exponentially over time in freshwater ecosystems and shows no sign of decreasing. For fish only, more than 40 alien species have been either voluntary or involuntary introduced in the past decades. About two-thirds are still present today and at least 26 are naturalized. As a result of voluntary introduction in the nineteenth century (aquaculture, sport fishing, and management of ecosystems) to unintentional but human-aided introductions (aquarium trade and global ship transport). The negative impacts of alien species on native species and ecosystems are most often unknown in France and needs further studies to develop a functional policy on alien species introductions and the protection of aquatic ecosystems integrity. The information gathered on alien species is able or not to establish sustainable populations in France and thereafter became invasive, such as gobies recently arrived.

INVASIVE ALIEN SPECIES Invasive Alien Species: Observations and Issues from Around the World Volume 1: Issues and Invasions in Africa Invasive alien species are spreading into new ecosystems each year. The impacts caused by these invaders can be swift and devastating. The topic of invasive alien species is large, complex, and globally significant at various scales, exacerbated by the globalization of world economies and increased trade and commerce that has overcome natural barriers. The globalization of world economies and increased trade and commerce that has overcome natural barriers threaten global food supplies, water quality and availability, and energy production and delivery. With the added risks associated with global climate change, the global homogenization of plants, animals, and microbes is a major factor in the decline in ecosystem health and ecosystem services worldwide. To counter this trend, there is a critical need to unify governments, cultures, and programs to improve cross-boundary coordination to effectively address the wide range of invasive species threats to human and animal health, particularly human health. This 4-volume work is the first to compile a set of useful material for key topics, to provide a better understanding of the overall global threat of invasive alien species and the diverse array of problems faced around the world, and assemble material that includes potential replicable solutions to overcome these threats. The books also highlight the threat posed by invasive alien species in terms of a global 'call to action'. Since invasive species have become a global concern, and the need to understand and manage them is growing, this book provides a comprehensive overview of the current state of knowledge of alien invasive species, and the diverse array of problems faced around the world, and sharing knowledge and examples of a diverse array of associated topics, we can advance global awareness and improve unified national responses to the threat posed by invasive alien species.

Biodiversity Enrichment in a Diverse World

Crayfish in Europe as Alien Species

International Introductions of Inland Aquatic Species

Newsletter

The Impact of Invasive Fish Species on Biodiversity in Lipsi Island, Greece

*Invasive non-native species are a major threat to global biodiversity. Often introduced accidentally through international travel or trade, they invade and colonize new habitats, often with devastating consequences for the local flora and fauna. Their environmental impacts can range from damage to resource production (e.g. agriculture and forestry) and infrastructure (e.g. buildings, road and water supply), to human health. They consequently can have major economic impacts. It is a priority to prevent their introduction and spread, as well as to control them. Freshwater ecosystems are particularly at risk from invasions and are landscape corridors that facilitate the spread of invasives. This book reviews the current state of knowledge of the most notable global invasive freshwater species or groups, based on their severity of economic impact, geographic distribution outside of their native range, extent of research, and recognition of the ecological severity of the impact of the species by the IUCN. As well as some of the very well-known species, the book also covers some invasives that are emerging as serious threats. Examples covered include a range of aquatic and riparian plants, insects, molluscs, crustacea, fish, amphibians, reptiles and mammals, as well as some major pathogens of aquatic organisms. The book also includes overview chapters synthesizing the ecological impact of invasive species in fresh water and summarizing practical implications for the management of rivers and other freshwater habitats.*

*Recent decades have seen significant changes in the biota of the Mediterranean and the Black Sea due to the introduction of non-indigenous species. Reliable scientific data on the dynamics of their distribution and abundance are essential to understand their ecological and economic effects. This review - in addition to providing images and descriptions of relevant species to aid in identification - presents a unique historical and regional perspective on these species' impacts, based on many years' worth of research. The Black Sea's primary invaders come from the Mediterranean. Species like the comb jelly Mnemiopsis leidyi have caused major declines in biodiversity in the region by crippling key segments of the food chain. Similar results have been noted in the Marmara Sea, a crucial water exchange point located between the Aegean Sea and the Black Sea. Infiltration into the Mediterranean comes from both the east and west - with Lessepsian species passing through the Suez Canal and fish and invertebrate species originating from the Atlantic expanding their ranges. As of the publication of this review, over 900 non-indigenous species have been reported in the Mediterranean and almost 300 in the Black Sea, with these numbers expected to rise in the future. Numerous Lessepsian fishes are commercially relevant and have been absorbed into local markets, particularly in the eastern Mediterranean region. While these species are targeted through various fishing techniques, many others are simply discarded due to a lack of value and there are even some, such as lionfishes, pufferfishes and several species of jellyfishes, that present immediate dangers to human health. Stewardship of native species, regional cooperation on the enforcement of legal measures, increased public awareness and the creation of marine protected areas are thus essential to minimize and reduce the impacts of non-indigenous species both in the Mediterranean and the Black Sea.*

*Biological invasions by alien (non-native) species are widely recognized as a significant component of human-caused global environmental change and the second most important cause of biodiversity decline. Alien species threaten many European ecosystems and have serious environmental, economic and health impacts. The DAISIE (Delivering Alien Invasive Species Inventories for Europe) project has now brought together all available information on alien species in Europe (terrestrial, aquatic and marine) and from all taxa (fungi, plants, animals). Thus for the first time, an overview and assessment of biological invasions in the Pan-European region is finally possible. The Handbook of Alien Species in Europe summarises the major findings of this groundbreaking research and addresses the invasion trends, pathways, and both economic as well as ecological impact for eight major taxonomic groups. Approximately 11,000 alien species recorded in Europe are listed, and fact sheets for 100 of the most invasive alien species are included, each with a distribution map and colour illustration. The book is complemented by a regularly updated internet database providing free additional information. With its highly interdisciplinary approach, DAISIE and its Handbook will be the basis for future scientific investigations as well as management and control of alien invasive species in Europe.*

*Bioinvasion is fast becoming one of the world's most costly ecological problems, as it disrupts agriculture, drastically alters ecosystems, spreads disease, and interferes with shipping. The economic and environmental damages from alien plant, animals, and microbes in the United States, British Isles, Australia, South Africa, India, and Brazil acco*

Biological Resources of Water

Effect of Rising Temperature, Alien Species and Fishing on Mediterranean Fish and Fisheries

Impacts to Fish and Wildlife in Ohio

Invasive Species in a Changing World

A Handbook of Global Freshwater Invasive Species

Report of an Ad Hoc Expert Consultation, 27-30 August 2003, Xishuangbanna, People's Republic of China

The U.S. government defines invasive species as "an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health." Invasive Species in the Pacific Northwest describes these species, how they got here, and the effects of their invasions on the region's environment. Each of 108 invasive species of fish, plants, invertebrates, mammals, and birds -- including earthworms, domestic cats and pigs, blackberries, European fruit flies, Japanese eelgrass, Mediterranean mussels, rats, and terrestrial mollusks -- is described in a 2-page spread that includes a full-color photograph of the species, a map showing the species' presence in the region, plus: -- Impact on communities and native species -- Control methods and management -- Life histories and species overview -- History of invasiveness Included are suggestions to help reduce the spread of invasive species; habitat preferences of Pacific Northwest invasive species; the World Conservation Union (IUCN) list of the world's 100 most invasive alien species; and a questionnaire designed to evaluate ecological impact and invasive potential. Invasive species have been recognized as an environmental issue since Charles Darwin's voyage on the H.M.S. Beagle. Editors P. D. Boersma, S. E. Reichard, and A. N. Van Buren explore the intentional and accidental introductions of invasive species. Whether these species were deliberately brought to the Northwest for agricultural, horticultural, aquacultural, or hunting and fishing purposes, or accidentally introduced as stowaways and contaminants, knowledge about them is integral to the protection of our environment.

North America is under attack by a wide range of invasive animals, pushing native breeds to the brink of extinction. Combining thrilling hunting adventures, a keen culinary imagination, and a passionate defense of the natural environment, *Eating Aliens* chronicles Landers' quest to hunt 12 invasive animal species and turn them into delicious meals. Get ready to dip into tacos filled with tasty black spiny-tailed iguana!

As the youngest, fastest-growing, and most dynamic protein-producing industry, has the key advantage of efficient use of feed that allows farmed fish to be competitively priced compared with terrestrial proteins. Sustainable Aquafeeds: Technological Innovation and Novel Ingredients explores the present and future evolution of feeds, explains the current challenges for aquaculture, and considers how advances in technologies and ingredients can produce aquafeeds for the increasing world population. International contributors to this book provide state-of-the-art information on the profile of the aquafeed industry, including factors affecting supplies and prices of key ingredients for aquafeed production. An entire set of chapters covers the scientific advances and feed industry initiatives in accordance with modern consumer trends, updating readers on the most promising strategies. These include the use of novel ingredients for nutrient supplementation and the enhancement of their use by genetic selection. The authors hope to inspire a collaboration of NGOs, researchers, and private partnerships to replace wild-caught ingredients by accelerating and supporting the scaling of innovative, alternative, aquaculture feed ingredients, including bacterial meals, plant-based proteins, algae, and yeast.

A global assessment of the current state of freshwater fish biodiversity and the opportunities and challenges to conservation.

Convention on the Conservation of European Wildlife and Habitats (Bern Convention)

Invasive Freshwater Species

Ecology of Fishes on Coral Reefs

Biological Invasions

Alien Species in North America and Hawaii

Report to the Water Research Commission

Provides information on invasive plants and animals in Ohio.

This open access book presents the proceedings volume of the YOUNARES 8 conference, which took place in Kiel, Germany, in September 2017, supported by the German Association for Marine Sciences (DGM). The YOUNARES conference series is entirely bottom-up organized by and for YOUNg MARine REsearchers. Qualified early career scientists moderated the scientific sessions during the conference and provided literature reviews on aspects of their research field. These reviews and the presenters' conference abstracts are compiled here. Thus, this book discusses highly topical fields of marine research and aims to act as a source of knowledge and inspiration for further reading and research.

Essay from the year 2008 in the collection *Ecology, grade: A, University of Bremen (Center of Marine Tropical Ecology), course: Essay for M.Sc. course, 57 entries in the bibliography, language: English, abstract: In the first part, this essay aims at providing a rough overview about the most important topics in the literature dealing with alien invasive species. This overview tries to answer questions about the general biology of alien invasive species and the existence of a perfect invader. However, some ecosystems seem to be more susceptible to invasion than others do. General assumptions are that the tropics are less invisable than temperate regions and that islands are more vulnerable than continental areas. An alien species must complete three stages of human-mediated spreading which are transportation, introduction and establishment in order to become invasive. An alien invasive species might then have positive or negative impacts. Either it adds to the species richness or it has detrimental effects on the ecological, economical or human health sector. However, sophisticated treatments are available to prevent several means of introduction. The second part of this essay will provide a critical evaluation about the literature reviewed. There still exists a great deal of uncertainty and variety of opinions within publications. The need of increased prevention of introductions and collaboration are conclusions that can be drawn. Furthermore, public awareness has to be raised and a clear definition of terms is a must. Finally, it is imporant to recall that many alien species are responsible for human well-being by providing food and aesthetics.*

Fresh waters are disproportionately rich in species, and represent global hotspots of biodiversity. However, they are also hotspots of endangerment.

Invasive Species in the Pacific Northwest

Balkan Biodiversity

Conservation of Freshwater Fishes

YOUNARES 8 – Oceans Across Boundaries: Learning from each other

Alien Invasive Species in Tropical Waters

A Guide to Designing Legal and Institutional Frameworks on Alien Invasive Species

*The world is in the midst of an ecological explosion with devastating implications. Thousands of species of microbes, plants, and animals are being introduced, both deliberately and inadvertently, to new land areas, seas, and freshwaters. In many regions, these new colonists are running wild, disrupting the dynamics of ecosystems, pushing native species toward extinction, and causing billions of dollars in direct economic damages.Alien Species in North America and Hawaii provides a comprehensive overview of the invasive species phenomenon, examining the threats posed and the damage that has already been done to ecosystems across North America and Hawaii. George W. Cox considers both the biological theory underlying invasions and the potential and actual effects on ecosystems and human activities. His book offers a framework for understanding the problem and provides a detailed examination of species and regions. Specific chapters examine: North American invaders and their threats how exotic species are dispersed to new regions how physical and biotic features influence the establishment and spread of invasives patterns of exotic invasions, with separate chapters covering each of the ten most seriously invaded regions and ecosystems patterns of invasiveness exhibited by major groups of exotics the theory of invasive capability of alien species and the resistance of communities to invasion theoretical aspects of ecosystem impacts of invaders and the evolutionary interaction of invaders and natives management and public policy issuesAlien Species in North America and Hawaii offers for the first time an assessment and synthesis of the problem of invasive species in North American and Hawaiian ecosystems. Scientists, conservation professionals, policymakers, and anyone involved with the study and control of invasive species will find the book an essential guide and reference to one of the most serious and widespread threats to global biodiversity.*

*Conservation Biology for All provides cutting-edge but basic conservation science to a global readership. A series of authoritative chapters have been written by the top names in conservation biology with the principal aim of disseminating cutting-edge conservation knowledge as widely as possible. Important topics such as balancing conversion and human needs, climate change, conservation planning, designing and analyzing conservation research, ecosystem services, endangered species management, extinctions, fire, habitat loss, and invasive species are covered. Numerous textboxes describing additional relevant material or case studies are also included. The global biodiversity crisis is now unstoppable; what can be saved in the developing world will require an educated constituency in both the developing and developed world. Habitat loss is particularly acute in developing countries, which is of special concern because it tends to be these locations where the greatest species diversity and richest centres of endemism are to be found. Sadly, developing world conservation scientists have found it difficult to access an authoritative textbook, which is particularly ironic since it is these countries where the potential benefits of knowledge application are greatest. There is now an urgent need to educate the next generation of scientists in developing countries, so that they are in a better position to protect their natural resources.*

*The use of alien species is a proven means to increase production and value from aquatic ecosystems. In the Mekong/Lanchang basin, alien species such as tilapia (Oreochromis spp.) play an important role in providing cheap and readily available protein to rural and poor sectors. However, alien species are now recognized as one of the most significant threats to aquatic biodiversity. Several steps are necessary for effective use and control of alien species, but one of the most important was identified to be following codes of practice similar to that developed by the International Council for the Exploration of the Sea.~Publisher's description.*

*This is the first attempt to synthesize current understanding of biodiversity in the great European hot spot. A diverse group of international researchers offers perspective on biodiversity at the level of the gene, species and ecosystem, including contributions on temporal change. Biological groups include plants, mammals, spiders and humans, cave-dwelling organisms, fish, aquatic invertebrates and algae.*

Aquatic Biodiversity

Biological Invasions in South Africa

Invasion Dynamics

International Mechanisms for the Control and Responsible Use of Alien Species in Aquatic Ecosystems

Non-indigenous species in the Mediterranean and the Black Sea

*Humans have moved organisms around the world for centuries but it is only relatively recently that invasion ecology has grown into a mainstream research field. This book examines both the spread and impact dynamics of invasive species, placing the science of invasion biology on a new, more rigorous, theoretical footing, and proposing a concept of adaptive networks as the foundation for future research. Biological invasions are considered not as simple invasions of species and reactions of invaded ecosystems, but as co-evolving complex adaptive systems with emergent features of network complexity and invasibility. Invasion Dynamics focuses on the ecology of invasive species and their impacts in recipient social-ecological systems. It discusses not only key advances and challenges within the traditional domain of invasion ecology, but introduces approaches, concepts, and insights from many other disciplines such as complexity science, systems science, and ecology more broadly. It will be of great value to invasion biologists analyzing spread and/or impact dynamics as well as other ecologists interested in spread processes or habitat management.*

*This book - Biodiversity Enrichment in a Diverse World - considered biodiversity (plants, animals, fungi, and microbes) from three different angles: genetics, species, and ecosystems. The relationships between them are complex and it looks at these aspects from different angles and also various interventions at different levels. The scientific approach of the book demonstrates that the three levels are closely inter-connected and action is therefore needed to conserve and protect the systems if the benefits provided to human life will continue to be available. However, conservation of the biological diversity is essentially an umbrella term for traditional species, relationship to human health, ecosystem conservation and the need to manage the human use of the species and ecosystems in a sustainable way. From the third international workshop on the subject (U. of Florence, 1997), come 18 papers reviewing the issue of alien crayfish decimating the relatively few native species in European freshwater environments. In a historical and taxonomic context, the initial paper explains why such homogenizatio*

Alien Fish Species in France with Emphasis on the Recent Invasion of Gobies

Invasive Aquatic Species of Europe. Distribution, Impacts and Management

Invasive Species and Biodiversity Management

Alien Fish Species in the Eastern Mediterranean Sea

Invasion Biology in Coastal Ecosystems

Eating Aliens

Observations and Issues from Around the World

*Readers are shown evidence of animal adaptation and the complexity of the food chain in Invasive Freshwater Species. Analyses of cases such as the troublesome zebra mollusk illustrate the major impact one unchecked species can have on human life and the environment. Patterns of species introduction and takeover in freshwaters teach students the key details of invasive species and illustrate the impact humans and animals have on each other.*

*All over the planet, organisms of many species are appearing outside of their natural habitatsNoften carried by that particularly peripatetic species Homo sapiens. This book marks the first comprehensive attempt to address problems posed by expanding populations of exotic plant and animal species in the Sonoran Desert and adjacent grasslands and riparian areas. It describes the arrival and spread of non-native species as diverse as rats and saltcedar, covering both their impacts and the management of those impacts. It is estimated that as much as 60 percent of the vegetative cover of the Sonoita Creek-Patagonia Reserve, the first Nature Conservancy area designated in Arizona, is dominated by exotic plants, and that introduced fish pose a recurrent threat to the native fish of that area. Meanwhile at the Grand Canyon, invasives such as tamarisk, red brome, carp, and catfish are pervasive either in the Colorado River or in the patches of desert scrub along its shores. Throughout the Sonoran Desert and adjacent areas, from islands in the Sea of CortZa to desert grasslands, some six hundred species of non-native plants and animals have become established, with bullfrogs and Mediterranean grasses now common where they once never existed. The book brings together contributors from academia, government, and nonprofit organizations, including such experts as Gary Paul Nabhan, Richard Mack, and Alberto Barquez-Montijo. They review historic and even prehistoric origins of non-native speciesNot only exotic plants, amphibians, and mammals but also insects, fish, and birds. They then examine significant problems in each major subregion and ecosystem and discuss control efforts. The volume contains the first compiled list of more than 500 naturalized exotic species in the Sonoran region. Invasive species issues are rapidly emerging as major environmental concerns both locally and worldwide. This book will assist professionalsNegologists, conservation biologists, and policy makersInvolved in invasive species control in the Southwest and will be a rich resource for all concerned with protecting native species and their habitats.*

*The local diversity and global richness of coral reef fishes, along with the diversity manifested in their morphology, behaviour and ecology, provides fascinating and diverse opportunities for study. Reflecting the very latest research in a broad and ever-growing field, this comprehensive guide is a must-read for anyone interested in the ecology of fishes on coral reefs. Featuring contributions from leaders in the field, the 36 chapters cover the full spectrum of current research. They are presented in five parts, considering coral reef fishes in the context of ecology, patterns and processes, human intervention and impacts, conservation, and past and current debates. Beautifully illustrated in full-colour, this book is designed to summarise and help build upon current knowledge and to facilitate further research. It is an ideal resource for those new to the field as well as for experienced researchers.*

*In this age of increased fundamental and applied research on biodiversity, no single volume was as yet devoted to the various temporal and spatial aspects of aquatic biodiversity. The present book is published in honour of Professor Henri Dumont (Ghent, Belgium) at the occasion of his retirement as Editor-in-Chief of Hydrobiologia. The volume presents a selection of contributions on aquatic biodiversity, written by colleagues from the editorial board, fellow editors of aquatic journals and former students and collaborators. Contributions deal with a wide spectrum of topics related to aquatic biodiversity and cover fields such as actual- and palaeolimnology, taxonomy, and fundamental and applied limnology. Even reconnaissance chapters on management and cultural impact of water bodies are included. The book combines state-of-the-art contributions in aquatic sciences.*

Invasive Exotic Species in the Sonoran Region

Understanding the Unintended Spread and Impact of Alien and Invasive Fish Species - Development of Management Guidelines for South African Inland Waters

Proceedings of the 2017 conference for YOUNg MARine REsearchers in Kiel, Germany

Pattern and Process in the European Hotspot

Sustainable Aquafeeds

Technological Innovation and Novel Ingredients

*The invasive species problem will become increasingly important in the years to come. Trade, travel and tourism are rapidly globalized, and border controls are reduced. This affects natural ecosystems in which aggressive invaders may have disastrous effects. New diseases affect human, animal and crop health. The Convention on Biological Diversity presents national authorities with a tall order in coping with this problem. For the first time in one volume, this book presents both ecological, biological and epidemiological aspects of invasive species, and the problem of disease organisms for agriculture and human health. The book constitutes a comprehensive background to the global strategy for managing invasive alien species which now is being developed by SCOPE and UNEP. The book is well suited for management staff in various environmental, economic and social sectors. It is essential for university and college teachers, researchers in ecology, natural resources management, and social sciences, as well as M.Sc. and Ph.D. students.*

*Seasonal quantitative sampling in two common coastal habitats was used to investigate habitat use of different life-stages of the common sandey areas were found to be highly important for the early life stages of L. scleratus. In contrast, Posidonia oceanica habitats were mainly preferred by larger (> 29 cm) reproductive adults with a maximum recorded size of 64 cm. Lagocephalus scleratus was fond to be an invertebrate and fish feeder while size classification revealed a tendency for an ontogenetic diet shift with increased size to a molluscivore feeding. The ontogenetic diet shift is most probably attributed to a shift in habitat use with increasing size. During early life stages L. scleratus inhabited sandy bottoms where it fed on various invertebrates, including the genus Nassarius and Dentallidae. The predominant molluscan species found in the diet of larger (> 20 cm) L. scleratus individuals was Sepia officinalis while predation of Octopus vulgaris was less successful. Sepia officinalis and O. vulgaris are of economic interest in the area and the impact of L. scleratus on local stocks of these species is discussed. Societal impacts were also evident in the area due to increased public attention concerning the lethal effects of the toxic L. scleratus, if consumed. Seasonal variations in the condition of L. scleratus did not show any significance and the high conditional values together with information on high numbers caught during samplings, signifies its ability to become an important member of the coastal fish community. Combined ecological, economical and social effects clearly classify L. scleratus a pest in the area*

*This open access volume presents a comprehensive account of all aspects of biological invasions in South Africa, where research has been conducted over more than three decades, and where bold initiatives have been implemented in attempts to control invasions and to reduce their ecological, economic and social effects. It covers a broad range of themes, including history, policy development and implementation, the status of invasions of animals and plants in terrestrial, marine and freshwater environments, the development of a robust ecological theory around biological invasions, the effectiveness of management interventions, and scenarios for the future. The South African situation stands out because of the remarkable diversity of the country, and the wide range of problems encountered in its varied ecosystems, which has resulted in a disproportionate investment into both research and management. The South African experience holds many lessons for other parts of the world, and this book should be of immense value to researchers, students, managers, and policy-makers who deal with biological invasions and ecosystem management and conservation in most other regions.*

Alien Fish Species in France with Emphasis on the Recent Invasion of Gobies

Freshwater Biodiversity

Handbook of Alien Species in Europe