CRC Press

aylor & Francis Group



Innovative Methods of Marine Ecosystem Restoration

Edited by

NEW!

Thomas J. Goreau

Global Coral Reef Alliance, Cambridge, Massachusetts

Robert Kent Trench

In the state of th

A CREATE CHERT OF

Emeritus Professor, University of California, Santa Barbara, and St. George de Beauce, Quebec, Canada

"We, and the rest of life with whom we share this planet, will have to survive in the future with an ocean that is hotter, higher, and more acidic than at any time in the recent evolutionary past. The ideas presented in this book will buy us time. They highlight the possible. They empower us with simple, cost-effective, and sustainable solutions for universal problems. The ideas in this book encourage us to reach into the only tool kit we have for broad-scale, long-lasting solutions. They exhort us to harness the restorative power of nature.

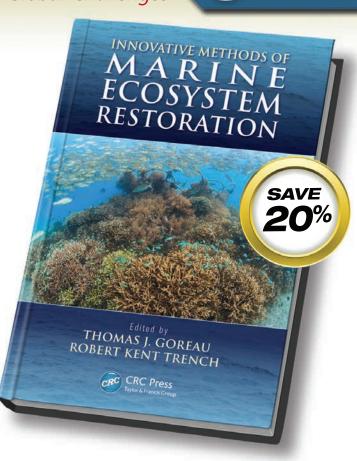
> -From the Foreword, James W. Porter, Ph.D., Josiah Meigs Professor of Ecology and Marine Sciences, University of Georgia

A Tool Kit for Broad-Scale, **Long-Lasting Solutions**

Innovative Methods of Marine Ecosystem **Restoration** offers a ray of hope in an increasingly gloomy scenario. This book is the first presentation of revolutionary new methods for restoring damaged marine ecosystems. It discusses new techniques for greatly increasing the recruitment, growth, survival, and resistance to stress of marine ecosystems, fisheries, and eroding shorelines, maintaining biodiversity and produc-

tivity where it would be lost. The book provides experimental proof that mild electrical stimulation results in increased settlement, increased growth, and reduced mortality for a wide variety of marine organisms, including corals, oysters, sponges, sea-grasses, and salt-marsh grasses.

See MIRE JOU'LE MISSING In addition to the diversity of ecosystems and geographic regions covered, the contributors from fourteen nations across the globe make this work the first truly global study of marine ecosystem restoration.



CRC

FEATURES

- Contains an integrated treatment of ecosystem restoration at the global and marine scales
- Shows the results of new methods that solve the major factors limiting the growth, productivity, and capacity to resist severe environmental stresses of most ecosystems
- Serves as a guide to both policies and practical steps to maintain ecosystems functioning
- Provides solutions to restore severely damaged ecosystems in a few years in places where no natural recovery has ever taken place
- Written by a global author team including contributors from Albania, Australia, Belize, Canada, China, France, Germany, Indonesia, Italy, Jamaica, Maldives, Panama, Sudan, Sweden, Thailand, and the United States
- Includes a CD containing full color images from the book, additional illustrations, and video

Catalog no. K15487, December 2012, 312 pp. ISBN: 978-1-4665-5773-4, \$99.95 / £63.99

See reverse side for Contents and ordering information

Innovative Methods of Marine Ecosystem Restoration



CONTENTS

Dedication to Wolf Hilbertz, Thomas J. Goreau

- Innovative Methods of Marine Ecosystem Restoration: An Introduction, *Thomas J. Goreau*
- Restoring Reefs to Grow Back Beaches and Protect Coasts from Erosion and Global Sea Level Rise, Thomas J. Goreau, Wolf Hilbertz, Abdul Azeez, Abdul Hakeem, Thomas Sarkisian, Frank Gutzeit, and Ari Spenhoff
- Reef Restoration Using Seawater Electrolysis in Jamaica, Thomas J. Goreau and Wolf Hilbertz
- Electrically Stimulated Corals in Indonesia Reef Restoration Projects Show Greatly Accelerated Growth Rates, Jamaludin Jompa, Suharto, Eka Marlina Anpusyahnur, Putra Nyoman Dwjja, Jobnico Subagio, Ilham Alimin, Rosihan Anwar, Syarif Syamsuddin, Thri Heni Utami Radiman, Heri Triyono, R. Ahmad Sue, and Nyoman Soeyasa
- Biorock Reef Restoration in Gili Trawangan, North Lombok, Indonesia, Lalu Arifin Aria Bakti, Arben Virgota, Luh Putu Ayu Damayanti, Thri Heni Utami Radiman, Ambar Retnowulan, Hernawati, Abdus Sabil, and Delphine Robbe

Enter discount code LWL36 at checkout and save 20%

Receive Free Standard Shipping when you order online at www.crcpress.com

Electrical Current Stimulates Coral Branching and Growth in Jakarta Bay, Neviaty P. Zamani, Khalid I. Abdallah, and Beginer Subhan

- Electricity Protects Coral from Overgrowth by an Encrusting Sponge in Indonesia, Jens Nitzsche
- Gorgonian Soft Corals Have Higher Growth and Survival in Electrical Fields, Diannisa Fitri and M. Aspari Rachman
- Suitability of Mineral Accretion as a Rehabilitation Method for Cold-Water Coral Reefs, Susanna M. Strömberg, Tomas Lundälv, and Thomas J. Goreau
- Utilization of Low-Voltage Electricity to Stimulate Cultivation of Pearl Oysters Pinctada maxima (Jameson), Prawita Tasya Karissa, Sukardi, Susilo Budi Priyono, N. Gustaf F. Mamangkey, and Joseph James Uel Taylor
- Increased Oyster Growth and Survival Using Biorock Technology, Nikola Berger, Mara Haseltine, J. T. Boehm, and Thomas J. Goreau

- Electrical Stimulation Increases Oyster Growth and Survival in Restoration Projects, Jason Shorr, James Cervino, Carmen Lin, Rand Weeks, and Thomas J. Goreau
- Restoration of Seagrass Mats (Posidonia oceanica) with Electrical Stimulation, Raffaele Vaccarella and Thomas J. Goreau
- Electrical Fields Increase Salt Marsh Survival and Growth and Speed Restoration in Adverse Conditions, James Cervino, Dajana Gjoza, Carmen Lin, Rand Weeks, and Thomas Goreau
- Fish Postlarval Capture and Culture for Restoring Fisheries, *Gilles Lecaillon*
- Mariculture Potential of Gracilaria Species [Rhodophyta] in Jamaican Nitrate-Enriched Back-Reef Habitats: Growth, Nutrient Uptake, and Elemental Composition, Arlen Havenner Macfarlane
- Sustainable Reef Design to Optimize Habitat Restoration, Mara G. Haseltine
- Marine Ecosystem Electrotherapy: Practice and Theory, *Thomas J. Goreau*

Join the CRC Press community!

Sign up for email alerts at CRCPress.com and be the first to know about new books in your area of interest. You will also receive exclusive discounts only available through our email and print promotions. Take full advantage of your insider savings and free shipping when you buy directly from CRCPress.com

http://www.crcpress.com





e-mail: orders@crcpress.com web: www.crcpress.com