

Enlightening Self-interest

Author: Beardsley, Timothy M.

Source: BioScience, 57(7) : 547

Published By: American Institute of Biological Sciences

URL: <https://doi.org/10.1641/B570701>

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

PUBLISHER
Richard T. O'Grady

EDITOR IN CHIEF
Timothy M. Beardsley

SENIOR EDITOR
Donna Daniels Verdier

PRODUCTION MANAGER / ART DIRECTOR
Herman Marshall

PUBLICATIONS ASSISTANT
Jennifer A. Williams

Editors: Eye on Education: Samantha J. Katz (educationoffice@aibs.org); Feature articles: Cathy Lundmark (features@aibs.org); Washington Watch: Robert E. Gropp (publicpolicy@aibs.org).

Editorial Associate: Barbara J. Orton.

Editorial Board: Agriculture: Sonny Ramaswamy; Animal Behavior: Janice Moore; Animal Development: Paula Mabey; Botany: Kathleen Donohue; Cell Biology: Randy Wayne; Ecology: Scott Collins, Daniel Simberloff; Ecotoxicology: Judith S. Weis; Education: Gordon E. Uno; Environmental Policy: Gordon Brown, J. Michael Scott; Evolutionary Biology: James Mallet; Genetics and Evolution: Martin Tracey; History and Philosophy: Richard M. Burian; Invertebrate Biology: Kirk Fitzhugh; Landscape Ecology: Monica Turner; Microbiology: Edna S. Kaneshiro; Molecular Biology: David Hillis; Molecular Evolution and Genomics: David Rand; Neurobiology: Cole Gilbert; Plant Development: Cynthia S. Jones; Policy Forum: Eric A. Fischer; Population Biology: Ben Pierce; Professional Biologist: Jean Wyld; Sensing and Computation: Geoffrey M. Henebry; Statistics: Kent E. Holsinger; Vertebrate Biology: Harvey B. Lillywhite.

Editorial Correspondence: 1444 I Street, NW, Suite 200, Washington, DC 20005; telephone: 202-628-1500; fax: 202-628-1509; e-mail: bioscience@aibs.org. Instructions for preparing a manuscript for *BioScience* can be found at www.aibs.org/bioscience/resources/Info_for_contribs.pdf.

Advertising: For information on both display and line classified advertisements and deadlines, contact John Rasanen, American Geological Institute; telephone: 703-379-2480, ext. 224; fax: 703-379-7563; e-mail: jrasanen@aibs.org.

BioScience (ISSN 0006-3568) is published monthly except July/August combined by the American Institute of Biological Sciences. To subscribe, call 1-800-992-2427, ext. 29. Individual membership: sustaining, \$90/yr; individual, \$70/yr; family, \$90/yr (includes \$36 for *BioScience*); emeritus, \$50/yr; K-12 teacher/administrator, \$45/yr (includes \$22 for *BioScience*); graduate and postdoctoral students, \$40/yr (includes \$21 for *BioScience*); undergraduate and K-12 students, \$20/yr (includes \$15 for *BioScience*); lifetime, \$1400 (one-time fee). Institutional subscriptions: domestic, \$337/yr; foreign, \$404/yr. Single copies: \$14 plus shipping and handling for up to 20 copies; volume discounts available for more than 20 (call 1-800-992-2427, ext. 29). Subscription renewal month is shown in the four-digit year-month code in the upper right corner of the mailing label.

© 2007 American Institute of Biological Sciences. All rights reserved. Periodical postage paid at Washington, DC, and additional mailing offices.

POSTMASTER: Send address changes to *BioScience* Circulation, AIBS, 1313 Dolley Madison Blvd., Suite 402, McLean, VA 22101. Printed in USA. AIBS authorizes photocopying for internal or personal use, provided the appropriate fee is paid directly to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923; telephone: 978-750-8400; fax: 978-750-4744; Web site: www.copyright.com.

To photocopy articles for classroom use, request authorization, subject to conditions thereof, from the Academic Permissions Service at CCC. Each copy must say "© [year] by the American Institute of Biological Sciences." Statements and opinions expressed in *BioScience* are those of the author(s) and do not necessarily reflect the official positions of the American Institute of Biological Sciences, the editors, the publisher, or the institutions with which the authors are affiliated. The editors, publisher, and AIBS disclaim any responsibility or liability for such material.

BioScience

Organisms from Molecules to the Environment

American Institute of Biological Sciences

Enlightening Self-interest

With long-term policymaking apparently gridlocked on even such a vital topic as global warming, it is heartening to learn that political consensus around an environmental issue has led to timely progress in a few instances. In the Forum essay that starts on p. 598 of this issue, Robert H. Richmond and his coauthors describe how three Micronesian island communities have been able—through science, resource stewardship, and traditional leadership systems—to change land-use practices in ways that should reduce deposition of damaging sediments on coral reefs.

Because coral reef degradation (stemming in large part from runoff and land-based sources of pollution) is a critical problem worldwide, the consensus that communities on Palau, Guam, and Pohnpei achieved in favor of action is worthy of note. Whether it will actually benefit reefs remains to be seen, but any good news about reef management ought to be scrutinized for lessons that can be used elsewhere.

The authors of the article, six of whom are native islanders, credit certain attitudes prevalent in many Pacific island cultures with allowing the communities to decide on their own to change their ways. Traditional policies, they say, acknowledge from the outset the need to control human activities for a community's benefit. That premise contrasts with US federal legislation, which stresses often outdated mitigation measures of dubious effectiveness. Moreover, some of the islands have direct reef tenure or ownership, and in many of them, the same villages or clans own both reefs and the upland areas in the watersheds that crucially affect the reefs via runoff. Thus, these communities are historically familiar with the concept of "ridge-to-reef" stewardship, and they have a long-term perspective.

Leaders on the three islands studied were briefed about research on the influence of local land use on adjacent coral reefs, and provided their own experience-based knowledge as background and context. As a consequence, in Guam and in Palau, residents soon initiated watershed restoration activities, and in Palau, they put a stop to clearing and grading of mangroves. In Pohnpei, local chiefs agreed to establish a protected area that limits harmful upland farming practices. The successes came about "through the participation of culturally connected researchers, traditional leaders, and community-based organizations," and seemingly resulted from consensus rather than hard-fought compromise.

Needless to say, not all traditional stewardship policies lead to successful ecosystem management, and formulas that led to progress in small island communities may not work in larger nations. But some lessons are applicable. As Richmond and colleagues ask, if coastal and offshore leases can be given for fish cages and oil drilling, why not for community-based conservation and protection?

Most environmental issues involve multiple stakeholders, although many stakeholders are unaware of what they stand to lose if a resource is damaged. Finding effective ways to make more people aware of their stake, and what they can do to protect it, would be a useful tactic for biologists. Most researchers attach importance—or should—to maintaining their objectivity on matters of science. At the same time, most want to ensure that their work is put to good use. Respectful communication of research findings to the players in ecological dramas, so that they are motivated to defend their own interests, can only help.

TIMOTHY M. BEARDSLEY
Editor in Chief

doi:10.1641/B570701
Include this information when citing this material.