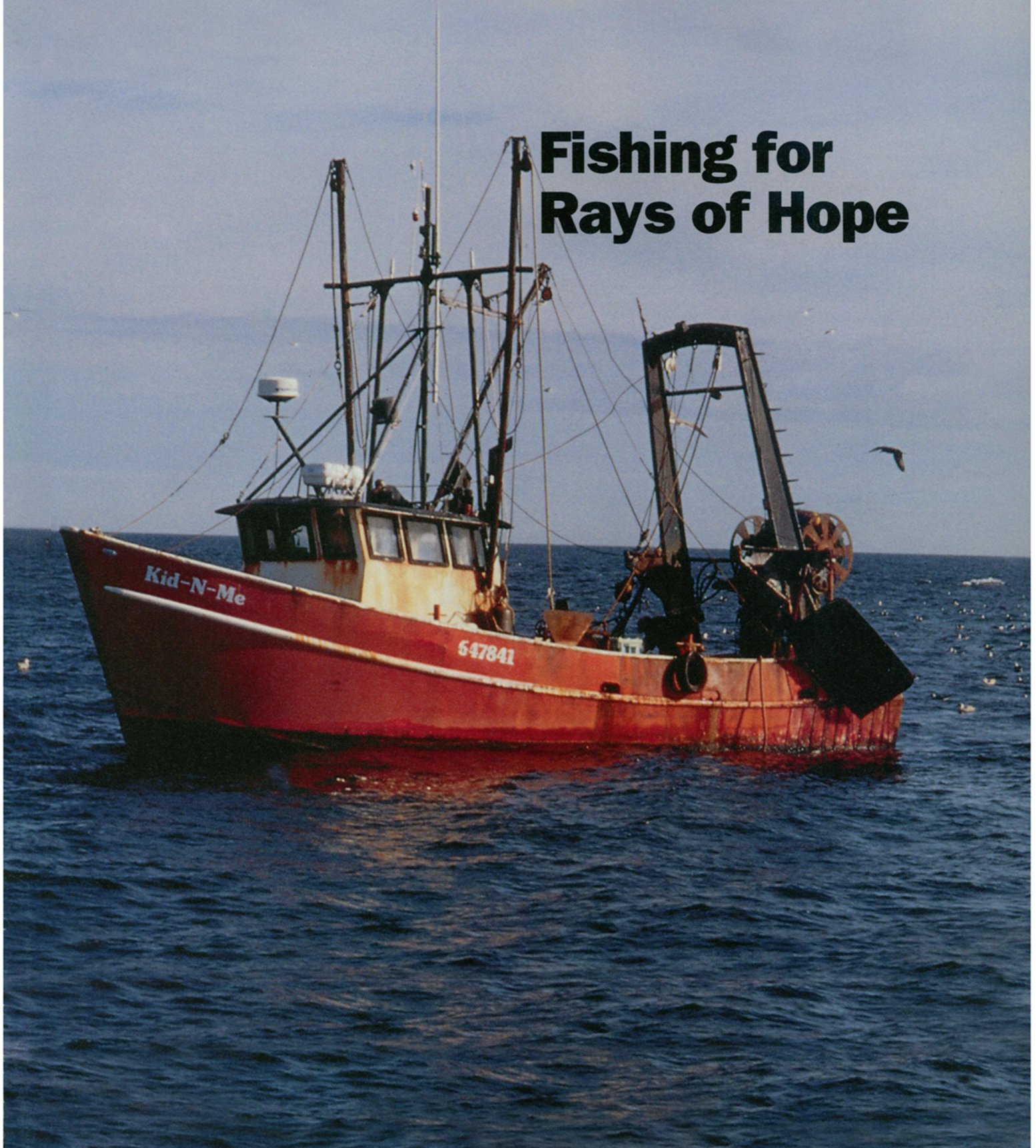


The Weekly Newsmagazine of Science

SCIENCE NEWS

May 1, 1999
Vol. 155, No. 18
Pages 273-288

Fishing for Rays of Hope



SCIENCE NEWS®

The Weekly Newsmagazine of Science

Volume 155, No. 18, May 1, 1999

This Week

- 276 Living-Cell Dialysis Works on Dogs
Nathan Seppa
- 276 Last drop squeezed from recycled tires
Peter Weiss
- 277 Dust from long ago made Leonid fireballs
Ron Cowen
- 277 Parasites make frogs grow extra legs
Susan Milius
- 278 Does obesity trigger chronic inflammation?
Janet Raloff
- 278 More than one way to mutate a cell's DNA
Laura Helmuth
- 279 Getting to the root of protein production
John Travis
- 279 Plants signal stress with a toluene burst
Corinna Wu

Articles

- 280 Skate-ing to Extinction?
Some long-lived fish are facing accidental annihilation
Janet Raloff

- 284 Plate Tectonics . . . on Mars
Magnetic map reveals ancient activity on the Red Planet
Ron Cowen

Research Notes

- 286 Astronomy
Black holes go middle class
Life on Mars: Take two
- 287 Biomedicine
Some fats may ward off colon cancer
Tuckered out by soccer? Try peanuts
Mom's cells tied to autoimmune ills
Cells link headache to heart disease

Departments

- 274 Books



Cover: Northeastern trawlers have contributed to the dramatic decline of the barndoor skate. Though not targeted by fishers, this sharklike species nevertheless has been so overfished that it may now face extinction. Its plight highlights both the vulnerability of long-lived fish that produce few young and the urgent need for measures to protect them. **Page 280**
(Photo: © David Comb)

Visit **SCIENCE NEWS ONLINE** for special features, columns, and references.

<http://www.sciencenews.org>

Now Available

New Edition! Four Years of Science News.

1995-1998 SCIENCE NEWS ON CD-ROM

Searchable full text of news stories, features, notes, and letters from January 1995 through December 1998
With selected illustrations and improved search capabilities

\$57.50 per order; \$47.50 for SCIENCE NEWS subscribers and owners of Science News 1995-1996 CD-ROM
Plus \$4 handling and mailing fee

To order, call or fill out the form below and mail today!

Visa or MasterCard, order today
1-800-544-4565 / DC 202-331-9653
FAX: 1-202-785-1242
Web: <http://www.sciencenews.org>
Includes Adobe® Acrobat® Reader Software for PC, Macintosh

Specifications for PCs 386SX processor or higher • Microsoft® Windows 3.1 or higher in an enhanced mode with virtual memory (and DOS 4.1 or higher) • 2X speed CD-ROM drive with Microsoft® MSCDEX ver. 2.0 or higher • 8 MB RAM with 6 MB of free hard disk space • VGA monitor as minimum. Super VGA monitor with 800 x 600 resolution is preferred
Specifications for Macintosh® System 7 or higher with Color Quickdraw is required • A Macintosh® compatible CD-ROM drive with Foreign File Access installed is required • 8 MB of RAM and 9.5 MB of hard disk space • A color monitor with 256 color display and 800 x 600 resolution

SCIENCE NEWS ON CD-ROM
1719 N Street, NW, Washington, DC 20036
SciNewsCDS
SciNewsCDN

Please send me _____ copy(ies) of **SCIENCE NEWS ON CD-ROM**

enclosed is \$61.50 — nonsubscriber's rate — for each order payable to **SCIENCE NEWS (includes postage and handling)**

enclosed is \$51.50 — subscriber's and owner's rate — for each order payable to **SCIENCE NEWS (includes postage and handling)**

bill my Visa or MasterCard \$61.50 nonsubscriber's rate

\$51.50 subscriber's rate, for each order.

Name _____
Address _____
City _____ State _____ Zip _____
Credit card # _____
Signature _____ Exp. Date _____
Daytime phone _____

(used only for problems with order) BB 121998

Journey from the Fundamentals of Life to the Extremes of Physics

Ever Since Adam and Eve

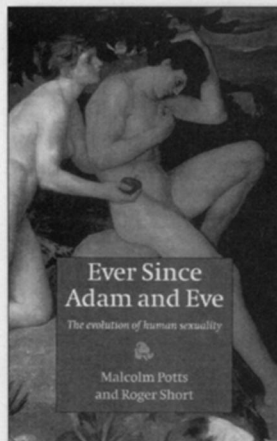
The Evolution of Human Sexuality

Malcolm Potts and Roger Short

"With abundant details and numerous fascinating sidebars illuminating seemingly all facets of the interplay between behavior and sex, Potts and Short present their topic with wit and insight."

— *Publishers Weekly*

1999 365 pp.
0-521-47042-0 Hardback \$74.95
0-521-64404-6 Paperback \$29.95



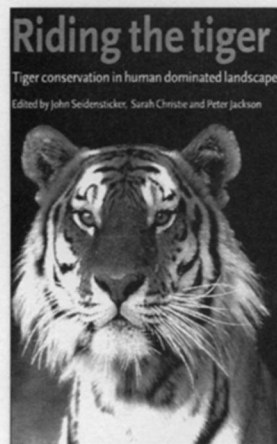
Riding the Tiger

Tiger Conservation in Human-Dominated Landscapes

John Seidensticker, Sarah Christie, and Peter Jackson, Editors

In this lavishly illustrated volume, leading conservationists working throughout Asia examine the tiger in both its natural setting and in our own consciousness. They also explore possible solutions of securing a future for wild tigers.

1999 380 pp.
0-521-64057-1 Hardback \$80.00
0-521-64835-1 Paperback \$34.95



Perils of a Restless Planet

Scientific Perspectives on Natural Disasters

Ernest Zebrowski, Jr.

"Zebrowski revisits some of the greatest horrors engendered by Mother Nature over the last thousand years and explains how they can be predicted and how they work."

— *Science News*

1999 320 pp.
0-521-65488-2 Paperback \$16.95

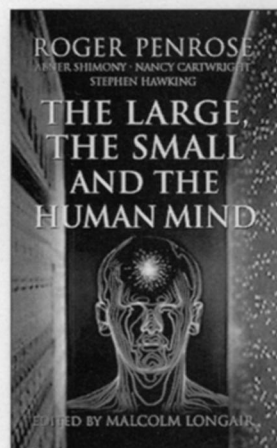
Earth

Evolution of a Habitable World

Jonathan I. Lunine

This outstanding overview of the history of our planet details everything from the evolution of the cosmos to the inner workings of living cells. It brings a fresh perspective to readers who wish to learn how our planet evolved to its present form.

1998 352 pp.
0-521-64423-2 Paperback \$29.95



Available in bookstores or from

**CAMBRIDGE
UNIVERSITY PRESS**

40 West 20th Street,
New York, NY 10011-4211
Call toll-free 800-872-7423
Web site: <http://www.cup.org>
MasterCard/VISA accepted.
Prices subject to change.

Our Worlds

The Magnetism and Thrill of Planetary Exploration

S. Alan Stern, Editor

In this rare, "insider" look into the universe and planetary science, readers are guided on an exciting voyage of discovery by eight distinguished researchers, from Chief Scientist on NASA's New Millennium Program Ellen Stofan to planetary theorist Bill McKinnon. Each shares to the fullest the science and emotion found in the most enticing discoveries and the wonders of the solar system.

1999 c.192 pp.
0-521-63164-5 Hardback \$54.95
0-521-64440-2 Paperback \$19.95

The New Solar System

Fourth Edition

J. Kelly Beatty, Carolyn Collins Petersen, and Andrew L. Chaikin, Editors

"Rich with data, information, illustration, interpretation and inspiration...with special emphasis on the new discoveries from recent missions."

— **Dr. Louis A. Friedman, Executive Director, The Planetary Society**

1999 421 pp.
0-521-64183-7 Hardback \$59.95
0-521-64587-5 Paperback \$39.95

The Nature of Mathematical Modeling

Neil Gershenfeld

"...anyone who wants a sense of how the language of mathematics has changed in the last 50 years will marvel at Gershenfeld's concise map..."

— *Boston Globe*

1998 356 pp.
0-521-57095-6 Hardback \$39.95

Now in paperback...

The Large, the Small and the Human Mind

Roger Penrose
Malcolm Longair, Editor

"...one could hardly ask for a shrewder or more enthusiastic tour guide to the extremes of physics."

— *Scientific American*

1999 128 pp.
0-521-65538-2 Paperback \$12.95