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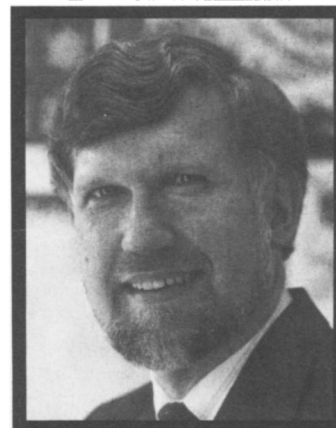
Peterson's lucid writings win math honor

Ivars Peterson, our mathematics and physics editor, taught high school science and math for eight years in his native Canada after graduating from the University of Toronto. Those years of dealing with the nimble minds of inquisitive students, he says, sharpened two skills that have stood him in good stead as an interviewer and writer: He learned to think and react quickly, and he learned what it takes to explain complicated concepts to people.

This week, the Joint Policy Board for Mathematics presented Ivars with its Mathematics Communications Award for "his exceptional skill in communicating mathematics to the general public over the last decade."

The board — representing the 55,000 members of the American Mathematical Society, the Mathematical Association of America and the Society for Industrial and Applied Mathematics — cited his "fascinating, yet down-to-earth [writing] style" in SCIENCE NEWS and in his two books, *The Mathematical Tourist: Snapshots of Modern Mathematics* (1989), which has sold more than 70,000 copies in hardback and paper, and *Islands of Truth: A Mathematical Mystery Cruise* (1990).

Ivars is the third writer to receive the award since its inception in 1988. James Gleick, author of *Chaos*, won it first, followed by playwright Hugh Whitmore for his intriguing drama, "Breaking the Code."



Claire Flanders

Long before Ivars left teaching, he found himself drawn to words and writ-

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Letters

Climatic inequities?

Your article on the progress toward a climate treaty ("Time for Action," SN: 3/30/91, p.200) is timely and important. However, the comparative bar chart showing "million Btu's per person per year" is, I believe, unfair to Canada and the United States on the basis of both their temperature and their size. Canada and to a large extent the United States are colder than other nations in the OECD group, and thus need more energy to stay warm. In addition, the great size of these North American nations, combined with low population densities, makes energy use per person for all forms of transport higher than for the other OECD nations.

Cyrus F. Wood
Physical Engineer
Estes Park, Colo.

Your energy chart appears to be inaccurate. Sighting down the United States bar gives about 265 million Btu's per person per year, and dividing by 365 days gives about 726,000 per day. At 1,055 joules per Btu, this becomes 766,000,000 joules per day, and at 1 watt-second per joule, this converts to approximately 74 amps at 120 volts, 24 hours per day.

Even allowing for automobile usage, this seems rather high.

Peter Skye
Glendale, Calif.

The graph reflects per capita energy use – the nationwide total divided by the number of citi-

zens. Such values give an indication of how much energy the average citizen consumes in a year, both directly (e.g., by driving a car) and indirectly (e.g., through the building of the highways upon which that car will travel).

– R. Monastersky

If the current theories about global greenhouse warming are correct, they suggest that it will be possible to manipulate the Earth's temperature by raising or lowering the carbon dioxide level. This opens up the possibility of "climate wars."

If, at some future date, the processes that would naturally lead to a new ice age occurred, the currently temperate countries could conspire to increase the carbon dioxide to maintain their climates, to the detriment of more equatorial countries that might benefit from this natural process. Conversely, if a natural warming cycle were to occur, currently temperate countries might engage in massive forestation or other programs to reduce carbon dioxide levels, to the detriment of colder countries such as Canada.

Any climate treaty worth considering should take these possibilities into account.

Jeffrey Roseman
Director, Center for Health Risk
Assessment and Disease Prevention
University of Alabama
Birmingham, Ala.

Battling mortality with mutants

Arthur M. Jackson (Letters, SN: 4/6/91, p.211) proposes large-scale research efforts to identify and spread temperature-adaptive coral

mutations through recombinant DNA technology. His arguments have merit, but so little support is being given to basic research or environmental monitoring in coral reefs that much of the fundamental cellular and molecular biology of temperature response of corals (and their symbiotic algae) is unknown, as are the actual temperatures that corals experience at most sites.

If Caribbean sea temperatures in 1991 reach only the levels of the third-warmest year of the last four, there will be widespread coral mortality this year ("Bleached Reefs," SN: 12/8/90, p.364). Identification and propagation of the needed mutants would need to begin immediately, because corals are so slow growing. But no facilities currently exist to select and maintain corals on the scale required. Indian Ocean coral species with the highest temperature tolerances in the world were devastated in the Persian Gulf by Saddam Hussein's environmental terrorism, and even if wide-scale reef restoration were promptly implemented and fully successful, it could take centuries to replace the dead corals and maintain the reef framework.

We desperately need to apply modern biological tools toward adapting corals and other reef organisms to rising temperatures, but this is unlikely to save the world's reefs without simultaneous and immediate efforts to reduce the other pressures on reef health and to halt climate change by stabilizing greenhouse-gas concentrations in the atmosphere.

Thomas J. Goreau
President, Global Coral Reef Alliance
Chappaqua, N.Y.

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ing. Outside his school duties, he wrote and published a monthly newsletter, PHOTON: PHYSICS FOR FUN, devoted to the wonders and joys of physics.

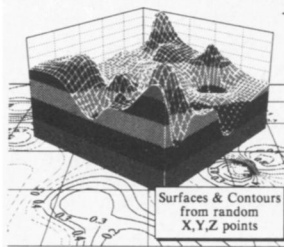
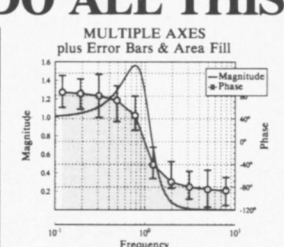
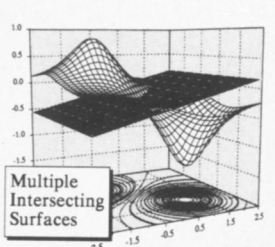
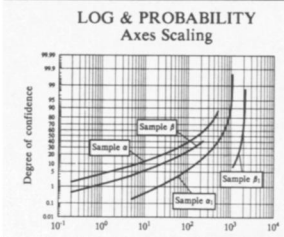

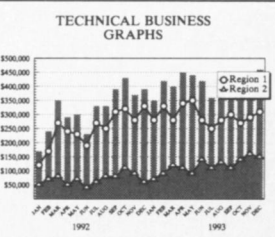
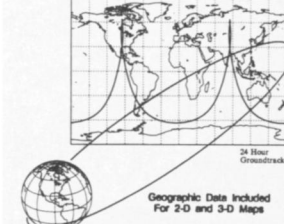
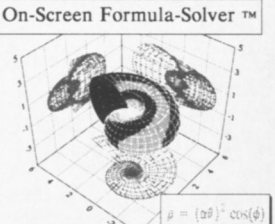
In 1980, he took a sabbatical to earn a masters degree in journalism at the University of Missouri, and never returned full-time to the classroom. He came to SCIENCE NEWS in 1981 as an intern and quickly distinguished himself. Joel Greenberg, the editor at the time, had the foresight to make Ivars a full-fledged member of the writing staff. And, as Ivars puts it, he himself had the foresight a few years later to marry Nancy Henderson, a writer with KIPLINGER'S PERSONAL FINANCE MAGAZINE.

We at SCIENCE NEWS and our readers have watched Ivars mature into one of those rare writers who can describe the intricate realms of mathematics and physics in language comprehensible even to those who, like myself, regard balancing a checkbook as higher mathematics. For that feat alone, he deserves an award.

Periodically we are visited at the office by the younger Peterson generation – Eric, 4, and Kenneth, 19 months. And I wonder, as I watch them play with Ivars' computer, whether either will follow in the parental footsteps.

– Patrick Young, Editor

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