SCIENCE NEWS®
A Science Service Publication
Vol. 113/June 10, 1978/No. 23

OF THE WEEK

Enzyme "detangler" 372
DNA research legislation: Laws or orders 372
Brain cell regeneration 373
Research secrecy order protested 373
Taming the unpredictable downburst 374
Seasat-A: Not just another weather satellite 374
Molecular hydrogen discovered in NGC 1068 374
Static pressure record set 375
Tick confirmed as arthritis carrier 375
Scientific selection for new Spacelab riders 375

RESEARCH NOTES

Chemistry 376
Behavior 376
Technology 383
Earth Sciences 383

ARTICLES

Light up your life — and save energy 377
The American Dream: A nightmare? 378

DEPARTMENTS

Books 370
Letters 371

COVER: A close-knit Italian family in Roseto, Pa., gathers for the usual family dinner in 1964. During the past decade, however, family ties have loosened and residents have become more independent, better educated and financially prosperous. But the change may also have rendered Rosetans — historically a healthy, robust people — more susceptible to illness and disease. See p. 378. (Photo: Remsen N. Wolff.)

Editorial and Business Offices
1719 N Street, N.W.
Washington, D.C. 20036

Subscription Department
231 West Center Street
Marion, Ohio 43302

Subscription rate: 1 yr., $12.50; 2 yrs., $22; 3 yrs., $30. (Add $2 a year for Canada and Mexico, $3 for all other countries.) Change of address: Four to six weeks' notice is required. Please state exactly how magazine is to be addressed. Include zip code.

Printed in U.S.A. Second class postage paid at Washington, D.C. Title registered as trademark U.S. and Canadian Patent Offices.

Published every Saturday by SCIENCE SERVICE, Inc. 1719 N St., N.W., Washington, D.C. 20036. (202-785-2255) TWX 710-822-9433 SCIEN NEWS. ISSN 0036-8423

LETTERS

Divesting medicine's vested interest

The recommendations for improving health care delivery in this country reported to have come from the Institute of Medicine (SN: 5/20/78, p. 325) are remarkable in their failure to come to grips with the main issue: the monopolization of "medical practice" by M.D.s.

What is needed in medicine, as in human services generally, is training at many levels of competence. This strategy distributes jobs as well as services, but, alas, it also appears to threaten the medical doctor's (or psychologist's, or lawyer's) unwarranted but financially rewarding grip on a certain territory.

Instead of trying to encourage M.D.s to "go into primary care," we should redefine and reorganize on the basis of public needs and prevention. Above all, we should remove the physician's vested interest in disease.

Dorothy Tennov
Stratford, Conn.

A soggy sponge

I would like to respond most strongly to the article "Metal Sponge For Hydrogen Fuel" (SN: 4/8/78, p. 213). I spent one and one-half years at the Energy Laboratory of Public Service Electric and Gas Co. (mentioned in the article). The PSE&G Hydrogen Storage Project (using Fe-Ti as a storage medium) has been cursorily ended (in 1976) after much press ballyhoo.

It was obviously, as presented in your article and others, a public relations campaign for this utility, on which many dedicated engineers spent great effort when the corporate planners had no intention of implementing the system.

Messrs. O'Grady and Erdman, laboratory managers, along with high-level executives in Newark, killed this program without even giving it a fair shake by implementing it within the energy production part of the utility.

So much for PSE&G's much-touted hydrogen storage program. It was doomed before it began.

Edward Siegel
Maplewood, N.J.

Averting global stagnation

The discussion of the recent work of Lester R. Brown on the limits to growth (SN: 5/20/78, p. 325) requires a further comment.

It is axiomatic that economic and demographic growth is limited by the sustainable yield of resources, whether "renewable" or not. But it is premature, and may be tragically misleading, to prescribe public policy on the assumption that those limits are fixed.

This is not an argument for unconstrained population growth: Every esthetic and practical consideration demands a great decrease in the rate of growth of our numbers. But the bulk of humanity lives under unacceptable conditions of privation, and even if population growth ceased now, a considerable increase in world economic output would be needed in the next few decades, if only to ensure global stability.

The conclusion that this increase in output can come only with increasing cost and ecological strain rests on two key assumptions: that the earth is a closed system of resources, and that the best (i.e., most efficient, least damaging) technology is being used to employ those resources. Both assumptions are false. For one thing, enormous material and energy resources are at hand in near-earth space, and can be developed in the immediate future, with existing technology, and with little or no additional burden to the earth's physical or biological systems. Then, too, the problems of deforestation, overgrazing, exhaustion of fisheries, and the like, are the result of the gross overextension of centuries-obsolete management practices. Would the Third World countries need to strip their forests for firewood, for example, if they had anything approaching modern energy delivery systems? But the investment required to upgrade their technologies implies a massive increase in economic output, which in turn depends on development of economical, nondamaging, nonconstrained sources of energy and materials. Those sources are, as mentioned above, available.

Averting Lester Brown's downward spiral into global stagnation will therefore require three great, interlocking efforts: to contain population growth, to develop the nonlimited resource supplies at hand and to upgrade outmoded resource management practices. Success is at least possible, and mankind surely owes itself more than simply to fold its hands and wait quietly for the end.

Peter H. Shaw
Guttenberg, N.J.

Toxicity and temperature

I refer to the report of my paper at the ACS meeting at Anaheim, "Wiring bugs for pesticide safety," which contains a small inaccuracy (SN: 3/25/78, p. 187).

The report states that I found peripheral motor nerves to be most affected by allethrin whereas, in fact, I showed that the peripheral nervous system, particularly sensory nerve fibers, is more sensitive to (hyperexcitation by) allethrin at 15°C than at 32°C. As the poisoning symptoms in the cockroach showed good correlations with the observed effects on the nervous system, I propose that this altered sensitivity with temperature explains the (previously known) greater toxicity of allethrin to the cockroach as temperature is lowered.

Derek Gammon
Cambridge, England

Correction:

The potency of nitrosamine (SN: 5/20/78, p. 326) should have read 9,000 revertants per microgram.