

SCIENCE NEWS®

The Weekly Newsmagazine of Science

Volume 156, No. 17, October 23, 1999

This Week

- 260 Global Burp Gassed Ancient Earth
Richard Monastersky
- 260 Brisk steps can reduce diabetes risk
Damaris Christensen
- 261 Snouts: A star is born in a very odd way
Susan Milius
- 261 Social factors may make gay men suicidal
Bruce Bower
- 262 Malagasy rift teems with prize fossil fauna
Oliver Baker
- 262 Parathyroid surgery proves its worth
Nathan Seppa
- 263 Checkpoints keep a growing nerve cell alive
John Travis
- 263 Laser's radiation pressure quiets a mirror
Ivars Peterson

Articles

- 264 **Wanted: Medical Isotopes**
Overcoming a critical scarcity of radioactive materials for research
Janet Raloff
- 268 **Should We Junk Linnaeus?**
A bold band of taxonomists proposes to change the way every living thing gets named
Susan Milius

Letters

Keep plant names rooted

As a newcomer to the study of plant families, a byproduct of my interest in herbal medicine, I see the great need for reclassifying plants based more on their evolutionary relationships and chemical components ("Botanists uproot their old tree of life," SN: 8/7/99, p. 85). But rather than turning the whole system upside-down, why not consider a simple solution? Add a prefix or suffix to the plant names, thus leaving them in their current order for identification purposes but allowing them also to be grouped by their emerging properties. With today's computer technology, searching either way would be a matter of a few simple keystrokes.

*Eleanor K. Sommer
Gainesville, Fla.*

Computers on the brain

You might be interested to know that the first brain-to-computer communication actually took place in the mid-to-late 1960s ("Mind over matter," SN: 8/28/99, p. 142). Edmond

Dewan, then at the Data Sciences Laboratory of the Air Force Cambridge Research Laboratories in Bedford, Mass., described the research in *NATURE*. A subject remained motionless while voltages from electrodes placed on the scalp were amplified and filtered, then sent to a computer. The subject attempted to control his alpha waves while listening to computer feedback of both alpha-wave content and the computer's interpretation in Morse code. The first communication transmitted by this method, direct from brain to computer, was the word *cybernetics*. I know about the experiment firsthand, as I was the programmer who developed the program.

*Shel Michaels
Hollis, N.H.*

The article left the impression that quadriplegics can only write letters by blinking to a human scribe. In fact, there is computer technology out there that can help. First, eye-trackers exist, which can tell roughly where a person's eye is pointing. And second, computer software can throw up lists of letters and words that are sorted by the probability

of use. For example, if *t* has been typed, then *he* is prominent in the subsequent list.

*Don Lindsay
Sunnyvale, Calif.*

Several sea sources

There is little doubt that the tsunami in Papua New Guinea was caused by an under-sea slump ("Seabed slide blamed for deadly tsunami," SN: 8/14/99, p. 100). This is not a new phenomenon. The seawave that destroyed parts of Valdez, Alaska, during the Good Friday Earthquake was very convincingly shown to be caused by a failure of glacial clays and similar sediments.

It has also been shown that tsunamis are often generated by earthquakes—in some cases by fault displacement and, in the biggest earthquakes, by excitation of the fundamental oscillation of Earth generated by the movement of large masses of the crust. The simple truth is that seawaves can be generated by several sources. It does not require a new paradigm to judge each on its merits.

*David Saint-Amand
Ridgecrest, Calif.*

Research Notes

- 270 **Earth Science**
Weather service's supercomputer burns
Ozone hole is smaller than last year
- 271 **Materials Science**
Carbon sieves for small molecules
From swirl to defect in wood grain
- 271 **Physics**
Twice-magic metal makes its debut
New view solves semiconductor puzzle
Collider can't cause cosmic calamity

Departments

- 258 **Books**
- 259 **Letters**



Cover: Increasingly, medicine has been investigating the use of radioactive drugs, such as those being manufactured here. This new wave of nuclear medicine has kindled interest in a host of relatively uncommon isotopes. Though demand for such materials exceeds supplies, innovative programs are evolving to help bridge the gap. **Page 264** (Photo: Mark Green/International Isotopes Inc.)

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

<http://www.sciencenews.org>

OCTOBER 23, 1999

SCIENCE NEWS, VOL. 156

259