dition appears to be the existence of a narrow crack along the fiber-matrix interface. The conditions for stability of reaction products are given by the Pourbaix diagram for the Cu-Cl-H_2O system (*2*).

Careful control of local ionic environment and use of organic templates or substrates have long been known as biomineralization strategies (*3*), and one wonders whether *G. dibranchiata* produces local mineral nucleation and growth conditions analogous (or at least related) to those in CAF formation.

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References
1. W. J. Ready, L. J. Turbini, *J. Electronic Mater.*, in press.
2. M. Pourbaix, *Lectures on Electrochemical Corrosion* (Plenum, New York, 1973), pp. 299–302.
3. H. A. Lowenstam, S. Weiner, *On Biomineralization* (Oxford Univ. Press, Oxford, 1989).

A National Ecological Observatory Network

IN HIS EDITORIAL "A TIGER TALE" (30 AUG., P. 1445), Donald Kennedy tells the cautionary story of the role of economic globalization in the spread of the Asian tiger mosquito, unknowingly imported in tires brought to the United States in the early 1980s on a Japanese freighter. Kennedy mentions the alien mosquito's possible relationship to the spread of West Nile virus. He says that our capacity to understand and deal with vector-borne infectious diseases such as West Nile has been limited because we have "shortchanged the science base needed by our public health infrastructure." These limitations extend far beyond holes in our public health infrastructure. They are equally driven by our failure to adequately invest in the required national scientific infrastructure to monitor, assess, and predict ecological change.

As Kennedy's "tiger tale" so vividly points out, increasing globalization and human activities can lead to unexpected consequences. These unforeseen changes can have dramatic and disruptive impacts on vegetation, climate, water supplies, and animal migration and can lead to the unexpected spread of invasive plant and animal species and infectious disease.

To realistically meet the challenges posed by globalization, we need to greatly expand our capacity to understand the relationship between humans and Earth's ecosystems. Improved understanding of the relationship will be the basis for enhanced predictions of potentially disruptive environmental changes.

The research required to develop this improved understanding must occur over a wide range of temporal and spatial scales and include all levels of biological organization from molecules to ecosystems. It will also require close coordination and excellent communication among diverse groups of researchers such as ecologists, economists, engineers, public health scientists, and policy experts.

In an effort to begin such necessary coordination, the Bush administration earlier this year proposed funding in its FY 2003 budget to begin to build a "National Ecological Observatory Network" (NEON) to be managed by the National Science Foundation. The network of ecological observatories envisioned by NEON will support ecological monitoring and research at unprecedented scales.

By providing the scientific community for the first time with the capability to formally collate long-term ecological records and data in a comprehensive and uniform manner, NEON would begin to meet the scientific infrastructure needs described above. It would also permit scientists from diverse disciplines to effectively coordinate their research efforts across scientific disciplines to achieve improved understanding of human interactions with Earth. Such a nationally coordinated and widespread data collection network would significantly enhance our ability to predict natural events such as droughts and wild- fires and mitigate the adverse impacts of unintentional disasters such as oil spills that change ecological systems and lead to economic and cultural dislocations. It could also someday even help us to predict and slow the spread of environmentally linked diseases such as West Nile virus, Lyme disease, and the Hanta virus.

For the benefit of the American people, it is critically important that Congress support the funding that the president has proposed for NEON.

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Letters to the Editor

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