

# REACTIONS

*Readers are invited to submit their reactions to the articles in our journal. Please address contributions to: ORIGINS, Geoscience Research Institute, 11060 Campus St., Loma Linda, California 92350 USA.*

## **Re: Roth: Incomplete Ecosystems (ORIGINS 21:51-56).**

Dr. Roth has focused his attention on incomplete terrestrial ecosystems. Hopefully, he will in a future ORIGINS issue zero-in on incomplete marine ecosystems.

Dr. Roth mentions in passing a rare chemosynthetic-based food chain which occurs only at some submarine volcanic vents. Unmentioned is the fact that twice as much photosynthetic activity occurs in Earth's waters today as on its land. The marine photosynthesizers are largely composed of diatoms, dinoflagellates, and coccolithophorids. Their sunlit habitat necessarily occupies the upper few meters of the sea.

In the geologic column these photosynthesizing phyla appear no deeper than the lower Jurassic. The Devonian, lower on the geologic column and purportedly 200 million years older, harbors so much fish diversity it is called the "Age of Fishes." For those healthy Devonian fish there ought to be a complete food chain including a superabundance of photosynthesizers. The complete absence of floating photosynthesizers in the lower strata creates a "missing fish food" mystery for conventional geology.

A prominent evolutionist facing this mystery in the 1970s wrote: "We can only conclude that the primary sources of nutrients for these animals must have been different. This problem has so far received little attention." Concluding the paragraph the author then speculates further that planktonic photosynthesizers must have existed in the lower strata but didn't "secrete mineralized shells or tough cellulose coverings" [McAlester AL. 1977. The history of life. 2d ed. Englewood Cliffs, NJ: Prentice-Hall, p 58].

For three decades at least, science has known of eukaryotic green algae from the Precambrian Bitter Springs formation of Australia. There, preservation is so perfect that photomicrographs of the sequence of individual cell division have been published. Shouldn't science have long since been able to document the presumably abundant plant food that formed the foundation for the Devonian fish food chain?

If one does not feel obligated to accept the hyperbolic ages attached to the strata, it is then easy to acknowledge that science has already documented the missing Devonian fish food. There it is, upstairs, in the Jurassic!

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