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# The Place Where Ecology Was Born

## Seventy years ago at Linsley Pond, a Yale biologist named G. E. Hutchinson started research that has changed the way we think about nature. Today, his scientific heirs are picking up where he left off.

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by Bruce Fellman

Naturalist and science writer Bruce Fellman is the managing editor of the *Yale Alumni Magazine.*

**Late last October, David Post rowed a small metal boat to the middle of Linsley Pond and readied his sampling gear.** It was a beautiful afternoon. Post was only a 15-minute drive from the Yale campus, but the scene was straight out of On Golden Pond. There were even loons—although, this being autumn, they were quiet.

The half-dozen undergraduates in Post's ecology course had already finished their work and come ashore. All that marred the glassy surface of the water were the splashes whenever Post dropped his plankton net or temperature-and-dissolved-oxygen probe overboard.

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As he worked, Post called out numbers to an assistant. The data—showing cooling temperatures and changes in water chemistry—told a typical story of a lake (biologically speaking, Linsley is not a pond) getting ready for the winter. But when Post pulled up his plankton net and found its collecting jar teeming with pinhead-sized, shrimp-like creatures, he shook his head in disbelief. "This is surprising—really, really surprising," he said. "Based on what we've learned about Linsley, these critters aren't supposed to be here."

Post had found a large species of water flea, or *Daphnia,* one of the biggest kinds of zooplankton. It is common in southern Connecticut but has rarely been recorded in Linsley, where the paleobiological record, in core samples taken from the lake bottom, goes back almost a thousand years. *Daphnia*'s sudden appearance was an unmistakable sign that the lake's biggest plankton predator, a species of herring called the alewife—or, in New England, the bucky—had died out.
For an ecosystem the size of Linsley, the demise of the resident buckies is a major event. For Post, a freshwater aquatic biologist, it creates an outstanding research opportunity. Coincidentally, a fish ladder will be built next spring to allow ocean-dwelling buckies to reach the lake for the first time in more than a hundred years. Post will have a deckside seat on one of the most important trends in environmental stewardship of the U.S. coast. He'll be able to record what happens to a radically altered ecosystem when humans try to return it to its pre-industrial condition. And he'll be doing it in one of the best-studied bodies of water on the planet—the place where G. E. Hutchinson and his students founded modern ecology.

**Linsley Pond is well studied not because it's biologically unique, or even unusual.** It's an extremely ordinary "kettle hole," a freshwater lake formed about 13,000 years ago from the melting of giant blocks of ice that were left behind and

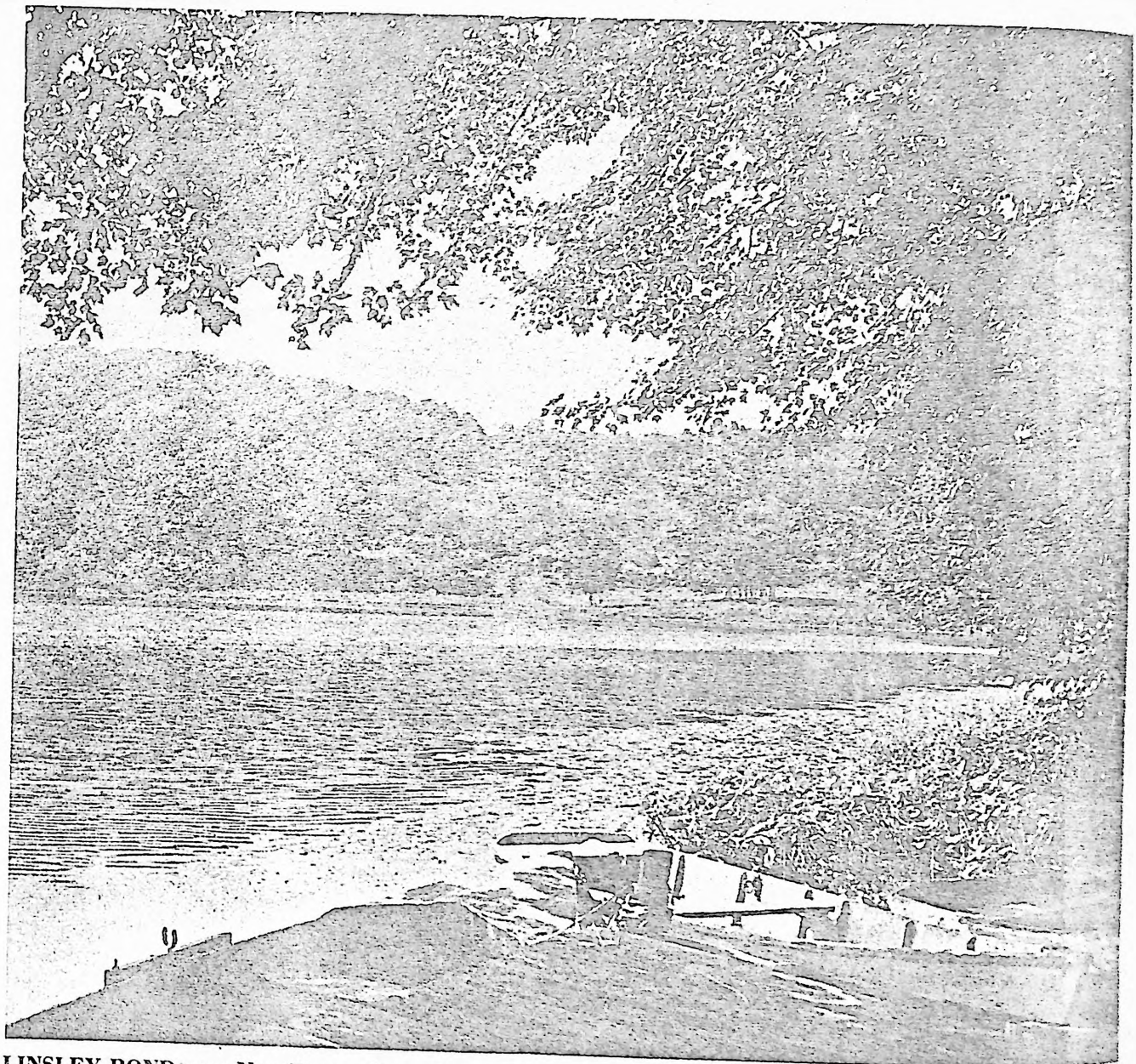
# LIFE IN THE DEPTHS OF A POND



The quiet waters of a small lake are an active universe of living things. On or near the bottom are tiny animals that are related to the whole yet unique in their adaptation to special conditions



by Edward S. Deevey, Jr.



**LINSLEY POND** near New Haven, Conn., is a typical "reduced" lake. In summer, when its aerated surface waters are too warm and light to be stirred into the depths the animals of the bottom do largely without oxygen



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