Paleontology Renaissance

We wish we could share Arthur J. Boucot's view (Letters, 20 Sept., p. 1188) that paleontology will be welcomed in biology departments. In our experience, whole-organism biology survives on some campuses only because paleontologists teach it in geology departments.

The renaissance of paleontology has included substantial efforts to fill an information gap left by biologists: living analogs of fossil organisms and systems. Such information is essential to the understanding of ancient organisms, communities, and environments, and ultimately, to the comprehension of large-scale evolutionary patterns and processes (macroevolution).

The unique contribution of paleontology is its comprehensive temporal perspective—the entire history of life. Although there is some basis for optimism (1), we are concerned that biologists have too often shared the general public apathy toward history, even when it is the evolutionary history of the systems they study.

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References

1. J. Kitchell, *Paleobiology* 11, 91 (1985).

Animal Welfare Legislation

I was a bit surprised by Eliot Marshall's briefing "USDA may be asked to police animal research" (News and Comment, 15 Nov., p. 789). The U.S. Department of Agriculture is responsible for enforcing the Animal Welfare Act and has had the primary role in enforcing animal care regulations in research facilities since 1966.

The legislation referred to in this article would amend the Animal Welfare Act and is a compromise version of the Improved Standards for Laboratory Animals Act of 1985 introduced by Senator Robert Dole (R–Kan.) (S. 1233) and myself (H.R. 2653). It is a moderate proposal and has received the support of the American Physiological Society, the As-

sociation of Professors in Medicine, and a variety of individual scientists. The House version has more than 120 cosponsors, the Senate version more than 40 cosponsors.

While the National Institutes of Health do set their own guidelines regarding animals used in NIH-funded research, private facilities and facilities that receive funds from other sources are not affected by NIH animal care guidelines. Because of growing concern about the treatment of laboratory animals, NIH has recently revised its animal care guidelines. It is only natural that the Animal Welfare Act should also be revised to reflect these concerns.

Because the Administration recognizes the difficulty of dual regulation of research facilities, an interagency task force has been formed for members of USDA, NIH, and others to consult each other regarding animal care regulations. In Congress, I have worked to make the amendments to the Animal Welfare Act as compatible with the NIH animal care guidelines as possible.

Our country has one of the finest research systems in the world. In Congress, I am a strong supporter of research programs and respect the vital contribution made by our country's research facilities.

While this legislation does increase precautions that research facilities may have to take with regard to the care and treatment of their animal subjects, I have worked to make it the least possible burden to researchers. It will not interfere with scientific inquiry. Instead, it will benefit the research community, since improving laboratory animal care can increase accuracy in research and enhance society's continued support for these institutions.

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Acid Rain Testing

Eliot Marshall's briefing about the Environmental Protection Agency's National Surface Water Survey (News and Comment, 13 Sept., p. 1070), quoted Michael Oppenheimer as stating that the survey results present "strong evidence that at least one-fifth of the otherwise undisturbed lakes in the Northeast have been significantly altered chemically and potentially biologically by acid precipitation." I agree with Oppenheimer's fur-

ther statement that it is "a problem that cries out" for attention, but we should not delude ourselves that the sampled lakes were "otherwise undisturbed." The lakes sampled in New Hampshire included a number that were receiving high-nutrient loads from agricultural and urban runoff—even one that had been treated with aluminum sulfate and sodium aluminate as part of an EPA Clean Lakes restoration project.

The EPA program should be taken for what it was: a survey of randomly selected lakes. It did not distinguish between undisturbed lakes and those receiving high-nutrient loads that tend to mask the effects of acid rain on pH and acid-neutralizing capacity. It was not a survey of the effects of acid rain on otherwise undisturbed lakes.

What is more alarming is the selection of Phase II lakes for biological and more intensive chemical monitoring. The Phase II lakes selected for New Hampshire include *no* high-altitude remote ponds. These ponds are the ones that first exhibit the devastating effects of acid rain.

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NBS Budget

I read with great dismay Mark Crawford's article about the financial difficulties being experienced by the National Bureau of Standards (News and Comment, 18 Oct., p. 300). I have always admired the work done by the NBS laboratories. However, I have a bone to pick with the graphics for the article.

The histogram showing the level of full-time staff employment at NBS was not drawn to scale. We, as scientists, are trained to read and understand graphs from early on. Presenting the histogram in a dramatic manner appeals at once to the emotionally driven decision-makers. When a scientific audience is being addressed, care must be taken not to appeal to the emotions.

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