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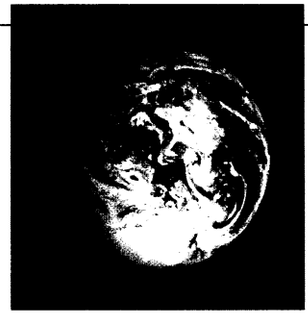
LETTERS

Objects of study



JPL

The planet Earth (at right) is indeed a proper object of study for NASA, says this week's first letter writer, Congressman Robert S. Walker (R–PA). Readers suggest that K–12 science education could be improved by opening teaching careers to Ph.D.'s, by enrolling teachers in university courses, and by better exploiting natural history museums. Conventions that might "clarify the duty of confidentiality" during peer review are offered. Concerns about interpreting clinical AIDS data and developing "live attenuated HIV-1 vaccines" are discussed. And whistleblowers not polled in a survey about whistleblowing might (it is pointed out) have something to say.

"Earth" Not Omitted Intentionally

The draft Omnibus Space Commercialization Act that was discussed at the 5 March Commercial Space Roundtable contains an inadvertent omission. Section 107 of the draft bill amends section 102(d) of the National Aeronautics and Space Act of 1958. It should read, "The expansion of human knowledge of the Earth and of phenomena in the atmosphere and space."

In staff submissions to the House of Representatives' legislative counsel office, the words "of the Earth" were inadvertently omitted. There was no intention to delete reference to the expansion of human knowledge of the Earth. There was no discussion among the staff or with me about excluding this important goal.

The ScienceScope item "Taking the Earth out of NASA" (15 Mar., p. 1485) indicates that there was some thought involved in leaving those particular words out and that, as a result, there is concern among the scientific community. I am happy to set the record straight.

Robert S. Walker
Chairman, Committee on Science, U.S. House of Representatives, Washington, DC 20515–6301, USA

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Good Teaching

Richard L. Hinman (Editorial, 15 Dec., p. 1739) prescribes "good programs for teachers," echoing Bruce Alberts' hope that Ph.D. scientists and young people should consider kindergarten through grade 12 (K–12) teaching careers (*1*). He is right.

It is time for real "action" to show that "good teachers produce good students." The politics and bureaucracy of school districts diffuses the enthusiasm considerably. Let us not add to it. Above all, the obstruction facing Ph.D.'s who lack a "teaching credential" should be removed. Restructuring is necessary to encourage Ph.D.'s to seek K–12 teaching careers.

Training teachers who are already employed is equally vital. They must take real university courses in the subject matter. The Josephine Miles Fellows Program for K–12 teachers was created at the University of California, Berkeley, in support of such an idea. It is imperative that we emphasize content and true excellence in teacher training. Good teachers with depth and breadth of knowledge are the architects of those minds who will shape and continue the progress of humankind.

Shoumen Datta
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References

1. B. Alberts, *J. Natl. Inst. Health Res.* **7**, 32 (1995).

Collections-based natural history museums should fall under Hinman's definition of "science museums." While the term "science museum" often refers to a hands-on science technology center, rather than a collections-based natural history museum, natural history museums are in the unique position of being able, in many instances, to integrate their scientific research activities with exhibitions and education programs, the latter including curriculum guides to dioramas for K–12 teachers and their classes; in-service

teacher training; interactive, hands-on tools to enhance the knowledge value of exhibit components; and family-oriented learning experiences. Thus these museums play a key role in promoting scientific literacy, including exposure to the scientific process, for the young.

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Confidentiality

There is a pending proposal pertinent to the unresolved confidentiality of submissions to peer-reviewed journals ("Suit alleges misuse of peer review," E. Marshall, News & Comment, 22 Dec., p. 1912). The definition of "research misconduct" recently recommended by the Commission on Research Integrity includes the intentional or reckless "use of any information in breach of any duty of confidentiality associated with the review of any manuscript or grant application." The word "any" leaves open whether a duty obtains.

The situation presents the following anomalies.

1) Authors make submissions voluntarily, and usually without entering into agreements about confidentiality with editors. (They sometimes even assign copyright shortly after submission.) When X voluntarily provides a document to Y, we expect confidentiality from Y only to the extent that X and Y have so agreed before Y's receipt. To what confidential treatment are journals willing to agree?

2) The nub of confidentiality is that a recipient not divulge the information. But journals are allowed to disclose submissions to referees as they choose.

3) Whether a duty of confidentiality is undertaken by a referee is merely contingent. It often rests on no more than an editor's transmittal letter, to which a referee usually does not expressly assent. Nor are such letters uniform.

4) A referee does not, and in virtue of anonymity, cannot, become bound to the author, the person whose ideas any duty protects.

Bentley Glass once observed that, to avoid using information in breach of its confidentiality, a referee or study section member would have to attempt noble self-deception, purporting to forget all, which is nearly impossible. Hence he proposed that study sections consist only of senior scientists no longer doing research in the pertinent field. All this confirms the truism that science depends on the trustworthiness of colleagues. Still it remains essential to clarify the duty of confidentiality if breach thereof is to be misconduct. One sensible convention would stipulate that (i) there is a duty not to effect or allow the appropriation of the contents of a submission; and (ii) a journal is answerable for the conduct of its anonymous referees unless it chooses, in the event of a dispute, to present to the author the explicit agreement of each referee to abide by (i). Such convention would induce journals to reach such agreements with referees.

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Attenuated HIV Vaccine: Caveats

Candidate human anti-AIDS vaccines should be safe and effective. In their report "Genomic structure of an attenuated quasi