Letters

Declining Amphibians

We would like to comment on the News Briefing about our work on amphibian populations in the Oregon Cascade Mountains "New task force on declining amphibians" (2 Aug., p. 509). Mortality of western toad eggs at one of our study sites, Lost Lake, has been noted for three consecutive years. In 1989, about 50% of approximately 1 million eggs laid perished because of lake water evaporation. In 1990, almost 100% of about 1 million eggs laid died because of unknown causes. In 1991, toad reproduction was much more successful, with about 50% of 2 million eggs hatching. Mortality occurred in developing eggs, and lack of fertilization was not a significant factor. Natural mortality of eggs in this lake has never been more than 5% in the 11 years of our study. Mortality of eggs, adults, and tadpoles of frogs and toads have occurred concurrently in several other nearby ponds and lakes in the Cascade Mountains.

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Saving Aboriginal DNA

Leslie Roberts (Research News, 21 June, p. 1614) describes the initiation of efforts by L. L. Cavalli-Sforza and others to salvage information about human genetic diversity. Certainly the need to document human variability before it disappears is of exceptional concern to the anthropological community. As isolates become admixed or otherwise disappear, the genetic information they can provide about population history and evolutionary processes also vanishes.

Surveying of human genetic diversity is also a central goal of the Anthropology Program at the National Science Foundation (NSF). While there is much to recommend the aims of the "mini-genome" project, the NSF program has been attempting to work toward similar goals within the limitations of its budget.

Roberts notes that the Anthropology Program budget would preclude our considering support for the collection efforts outlined. Actually, the budget is even less robust than described, and only a fraction is available to fund research in all physical anthropology. Yet, for years the program has funded efforts to gather information on human diversity at the DNA and other levels. Besides the gathering of new samples, there may be complementary approaches. For instance, the program is undertaking support of efforts to squeeze more information out of the thousands of washed red cell samples in freezers around the world. These samples, gathered in the days when red cell markers were the closest approach one could make to the genes, may be resurrected through the polymerase chain reaction technique. If these efforts are successful, the DNA information can be linked to existing information about protein variation. Other researchers now being supported are gathering new samples and genetic data about a variety of isolates.

A coordinated effort such as that described in Roberts' article has much to recommend it. I would hope that as the project goes forward the NSF and the Anthropology Program will be able to assist in these efforts through competitive awards to the community of scientists interested in human genetic diversity.

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Homo sapiens' Reproductive Drive

Paul Ehrlich and E. O. Wilson, in their article "Biodiversity studies: Science and policy" (16 Aug., p. 759), are remarkably anthropocentric in their dichotomization of extinctions into natural and human caused. *Homo sapiens* represents an extremely potent but very natural factor in the current biodiversity reduction. Indeed, it it our natural reproductive drive that has made us the unwilling natural mechanisms for the current mass extinction event.

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Correction

I would like to point out that, in my report "Early differentiation of the earth and the problem of mantle siderophile elements: A new approach" (19 July, p. 303), columns 3 and 4 of table 1 (p. 305), which show the calculated K_d values at 3000 and 3500 K, are incorrect. The correct data are as follows.

K_d 3000 K	K_d 3500 K
0.041	0.065
0.087	0.123
0.26	0.318
4.3	3.5
19.9	13.0
12.8	8.9
15.0	10.2
66.6	36.5
39.3	23.3
57.9	32.4
49.4	28.3
77.4	41.6
144	70.6
546	222
1826	624

The data plotted in the graphs have the correct high temperature K_d values, and the conclusions of the paper are unaffected by this transcription error. Also, in the heading, the phrase "calculated for an oxygen fugacity of 12.5" should have read, "calculated for an oxygen fugacity $\log f(O_2) = -12.5$".

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Fragile X Gene

Leslie Roberts, in her article "Report card on the genome project" (News & Comment, 26 July, p. 376), writes that James Watson, director of the Human Genome Project, says the discovery of the fragile X gene was made "about 5 years sooner than would have occurred without the genome project." Four reports about the fragile X gene have appeared (*1, 2*). Only one of these (*2*) credits the genome project. Investigators in at least four countries were involved in this research. The discovery of the gene in Australia and France was made without American funds. To say that the genome project in the United States saved "about 5 years" is clearly incorrect. To say it contributed is enough.

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REFERENCES

1. S. Yu *et al.*, *Science* **250**, 1179 (1990); I. Oberlé *et al.*, *ibid.* **252**, 1097 (1991); E. J. Kremer *et al.*, *ibid.*, p. 1711.
2. A. J. M. H. Verkerk *et al.*, *Cell* **65**, 905 (1991).