portant fact is that periodically a redwood tree falls and there are competing species ready to take its place.

All the evidence we have been able to collect to date suggests that time is running out for the alluvial-flat redwoods and that flood control could be the final blow unless man actively intervenes with herbicides, the ax, or the chainsaw. Strong support behind a program of active intervention is urgently needed. Our hope is that it will not be too late in coming.

EDWARD C. STONE
RICHARD B. VASEY
School of Forestry and Conservation, University of California, Berkeley 94720

Defeated by Bad Calculus Text

Regarding the article "Shortage of mathematic teachers" (8 Mar., p. 1082), I wonder if the Committee on the Undergraduate Program in Mathematics might not do well to examine the undergraduate curriculum as well as the graduate degree requirements. As a parent, I have watched a budding mathematician nipped and changing her major in her sophomore year as the result of a disastrously planned course in calculus. She had not only been highly interested in mathematics since grammar school, but had scored extremely well in all the standard battery of aptitude tests and was, in fact, placed in an "advanced" math group on the basis of her aptitude and background in math. There seems some evidence that the student was not wholly at fault. Her textbook was new, published, in fact, so recently that hers was the first class to use it. Though it is not my field, I know enough math to recognize that it was poorly conceived for teaching purposes —a number of the signs and processes needed to understand early chapters, for instance, were not explained before the second half of the book.

I was close to this experience but I am also aware of other students, in both high school and college, who are shunted away from a math career by a combination of incomprehensible texts and teachers who, however brilliant they may be at learning math, seem unable to explain the why and how of the more abstract processes. (I have been informed by one expert that "There *are* no good calculus texts.") The student referred to above understood more calculus from a weekend's intensive reading of the article in the *Brittanica* than from 2 months of class work.

Obviously, if fewer students were discouraged from finishing undergraduate majors in math, at least the potential pool for graduate study would be greater.

JAMES H. FLEMING
11325 South Bell Avenue, Chicago, Illinois 60643

Erratic Scores by the Computer

It may be that "The future of scientific journals" (1 Dec., p. 1153) will involve computer selection of information of personal interest to each reader. If such a computer system could act as my alter ego, so that I got a stream of information similar to, but, hopefully, much more complete than, that which I now select in my journeys through the journals, it would be utopian.

The present computer capability for information selection falls far short of this ideal, however. My most recent skirmish with a computer information retrieval system gave the following results: 154 total references listed; 12 references with close connection to my area of interest; 131 references with only distant relation; and 11 references