

Countercurrents



Divers in the Gulf of Mexico prepare to remove a coral core using a specialized drill. See "Coral cores from the Flower Gardens" on page 4. Photo by Ken Deslarzes.

The Next Generation

Traditional graduate education in oceanography produces Ph.D.s prepared for jobs in academic or research institutions supported by grants. The scientist-clone model worked well when oceanography programs were rapidly expanding, but in the present budgetary and political climate it is unlikely that the rate of growth can be sustained through the 1990s into the next century. It is appropriate to reexamine our objectives and strategies with the goal of matching the skills of our future graduates to the needs of their employers.

Certainly the demographics of our field portend change. Compared to the 1992-93 academic year, new enrollment of graduate students is down an average 32% at twenty-four oceanography or marine science institutions in the United States. Among the ten JOI schools* graduate enrollment dropped 41% over the same period, although applications decreased only 3%. The number of graduate students "in the pipeline" is just beginning to reflect the declining enrollment, but the production rate of Ph.D.s from the JOI schools remains essentially unchanged at about 100 per year.

Our experience at Texas A&M is similar. Enrollment of new graduate students this year was about half that in 1991-92, and our total enrollment has declined about 10% from a recent maximum in 1993.

The enrollment downturn results in part from the increasing difficulty in obtaining grant funding with support

for new graduate students. The problems are exacerbated by rising costs of tuition, fees, stipends, and insurance, which can make research assistants nearly as expensive as technicians or post-doctorals. At the other end of the pipeline, some Ph.D. graduates who prepared for research-based academic careers have been unable to find acceptable positions, which leads to dissatisfaction with the educational experience. In this environment, faculty researchers are understandably cautious about accepting new students.

It seems we have a growing mismatch between product and consumer. Sound marketing practice indicates we should listen to our customers—students, employers and taxpayers—to provide maximally useful educational opportunities. We must clearly explain to the public how our research relates to society's needs. Those needs should be better defined to determine how well (or poorly) we are preparing our students to meet them.

If you are a Texas A&M oceanography graduate, please let us hear from you. We want to know your current mail and email address, employment history, what you found most (and least) useful in your graduate studies, and how we can better serve our present and future students. Our goal is to provide a more flexible graduate education, leading to a spectrum of career opportunities broader than the traditional model can provide.

—David A. Brooks
Editor

*The Joint Oceanographic, Incorporated (JOI) schools are: Lamont-Doherty Earth Observatory of Columbia University, Oregon State University, Scripps Institution of Oceanography, Texas A&M University, University of Hawaii, University of Miami, University of Rhode Island, University of Texas at Austin, University of Washington, and Woods Hole Oceanographic Institution.