

THE OCEANOGRAPHY SOCIETY AND ITS ACADEMIC PARALLEL

"Flags" provide an essential ingredient.

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In a professional field such as oceanography, societies relate strongly to academic units. Those units, usually departments, introduce careers to individuals and initiate their preparations for them. Societies then guide, nourish, and represent the individuals in professional growth. The Oceanography Society can take advantage of related experience already accumulated in the on-campus development of oceanography.

Individual oceanographers and their associates now stand at a point in their organizational planning similar to that faced by ocean programs in academic institutions in the late 1940s. In these institutions there were strong marine oriented capabilities and interests in departments such as chemistry, biology, geology, physics and the various branches of engineering. Successful work in oceanography thus seemed to require only the cooperation of these departments in an interdisciplinary institute.

Some of the best known of such institutes were those which existed at the University of California, at Woods Hole, at the University of Washington, and at Miami. National support for the programs of these institutes was negotiated in Washington, D.C. by the individual directors. At that time, the established science departments were generally disinclined to take the initiative in forming on-campus departments of oceanography. In fact, some thought it "doubtful whether there is need for new organizations for specialized training in oceanography," and that the need could "largely be met within existing oceanographic patterns of universities" (Knudsen, *et al.*, 1950).

In all endeavors, especially one like the formation of a new society, "flags" provide an essential ingredient. Once one is hoisted, representing an area of interest and a set of goals and objectives, unexpected sources of support and previously unknown sources of strong personal and institutional interest are attracted. The success or failure of the society is determined in part by the response to the flag it hoists. In a university, the designation of a program as a department pro-

vides such a flag. In January 1949, one of the first on-campus departments of oceanography was established at what is now Texas A&M University (Leipper, 1950). Using the campus base, it covered the four traditional disciplines within oceanography. In addition, the important meteorological and engineering aspects of the subject were recognized. A new type of flag had been raised. The Department of Oceanography grew rapidly, and soon a number of such departments were organized at other universities. More specific definitions than those of Knudsen *et al.* were required to distinguish courses and to clarify relationships with other science departments (Leipper, 1961).

The recognition of the new departmental units placed oceanography in a completely new role. When the university academic council met, oceanography was represented and had a voice and a vote. Whenever plans for the future of the university were made, oceanography was a part of them. When budgets were drawn up, oceanography was considered along with the other established disciplines. Tenure-track appointments were made and faculty recognition and advancement in oceanography took place through the regular procedures. Curricula could be organized and implemented by oceanographers, and degrees could be granted. The facilities of the universities were available to oceanography with no special arrangements or funding being required. There was the established order of administrative officials to provide information and to represent the department in obtaining support. There was great new strength for oceanography. The marine efforts in the related departments were broadened and intensified as a result of the presence among them of an oceanography department with sea-going capabilities.

Now, the graduates of the oceanography departments, together with the large body of oceanographers who have become qualified through strong interest and practical experience, constitute a group which would give considerable initial

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Thirdly, graduate schools need to recognize that entering students come from a variety of backgrounds, each with its own inherent strengths and weaknesses. Some allowance must be made for this in the graduate curricula.

One step that has been taken in this direction by the Joint Program is the introduction of a math course in the first summer, designed to help ensure that students do not start their first semester with a disadvantage in this area. Finally, departments offering bachelor's degrees in oceanography should track their graduates and see how they have fared in their further education and careers. This information, along with statistics from graduate departments of oceanography on the rate of acceptance of applicants and the fate of the admittees, classified by undergraduate major, should be useful in future evaluation of under-

graduate programs.

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- TABLE 1. A PARTIAL LIST OF INSTITUTIONS OFFERING BACHELOR'S DEGREES IN OCEANOGRAPHY OR MARINE SCIENCE.
- Florida Institute of Technology, FL
Humboldt State College, CA
Millersville State College, PA
Southampton College, NY
Stockton State College, NJ
Texas A&M University at Galveston, TX
U.S. Naval Academy, MD
University of Miami, FL
University of Michigan, MI
University of South Carolina, SC
University of Washington, WA

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OPTICAL OCEANOGRAPHY [CONTINUED FROM PAGE 23]

ACKNOWLEDGMENTS

There are some 80 - 100 researchers active in ocean optics in the Western world. Regrettably, space did not allow fair representation of all their efforts, past and present. The author is indebted to the community as a whole. Several individuals are owed special thanks for their comments and advice: Ros Austin, Ken Carder, Howard Gordon, Frank Hoge, Curt Moble, Hasong Pak, Ray Smith, Charlie Yentsch and Ron Zaneveld.

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strength to a society in their own specialty. A new society would provide a mechanism for evaluating this strength, for focusing it, and maximizing its application. The changes which can be brought about in the world of social organizations by the activities of The Oceanography Society could well be comparable to the changes which were brought on-campus by the establishment of oceanography departments.

As in the universities, where all departments cooperating in the marine sciences saw those programs strengthened by the existence of an oceanography department in their midst, it is likely that the ocean-oriented programs of brother societies would be strengthened by their association with The Oceanography Society. A broader and deeper basis for support of all applications of ocean science, engineering, and technology could be tapped.

The potential of oceanography seems unlimited. The oceans constitute a major part of our planet. Understanding and fully utilizing the oceans will require all the knowledge of the basic sciences and all of the skills of engineering and technology. To obtain appropriate support and to seek this understanding effectively requires the coordination and focusing of the many different participating institutions and societies. A missing element has been a dedicated Oceanography Society.

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