

# Sea Grant: Four years later

The national Sea Grant Program has racked up a long list of accomplishments, but it may soon founder without finer focus or increased funding

by Louise Purrett

After four full years of operation of the Sea Grant Program, an oceanic imitation of the century-old Land Grant Program, four universities have been named Sea Grant Colleges: Rhode Island, Oregon State, Washington and Texas A&M. (This means that they have continuing programs that the National Oceanic and Atmospheric Administration considers to have particularly high quality.) Though this was a major milestone in the development of the program, the announcement received scant attention. At the Fourth Annual Sea Grant Conference in Madison, Wis., last month, the mood was similarly downbeat: not celebration but taking stock, looking for areas where Sea Grant could make useful contributions, rather than listing accomplishments.

The Sea Grant Program began on Oct. 15, 1966, when Congress passed the Pell-Rogers Act. The act calls for eventual development of a network of Sea Grant Colleges. These, it was hoped, would promote marine development as the land-grant colleges had the agricultural and mechanical arts.

The Sea Grant College idea was first proposed in 1963 by Athelstan Spilhaus to fill a gap between "our excellent science and the pitiful state of the U.S. performance in the exploitation of the sea." Sea Grant Colleges would provide "a focus, a commitment and continuing support . . . to bring the United States to a position of leadership in ocean engineering and aquaculture." Indeed, the stated purposes of the act are to bring about the "gainful use" of marine resources by providing "greater economic opportunities, including expanded employment and commerce; the enjoyment and use of our marine resources; new sources of food; and new means for development of marine resources" through programs for research, education and training of skilled manpower and advisory services.

There is no question that the pro-

gram is an active one. More than 400 scientific reports have been issued to date, encompassing every conceivable aspect of lake and marine conservation and exploitation. Since 1968, \$40 million has been invested in projects in 27 states, the Virgin Islands and the District of Columbia. Currently, Sea Grants finance some 547 projects, 457 of them under institutional grants to 13 colleges and universities. These projects cover the areas of fisheries and aquaculture, ocean engineering, coastal zone resources management, marine pharmacology and pharmaceuticals, pollution, ecological studies, mineral resources, marine and coastal zone law and economics, biological oceanography, seafood science and technology, management and preservation of the environment, man in the sea, and physical and chemical oceanography. Published reports cover such subjects as acoustic techniques of estimating fish populations, wave forces on submerged structures, sand mining on the con-

tinental shelf, extending the shipping season on the St. Lawrence Seaway. Among its more spectacular accomplishments are the discovery and identification of mineral deposits in the Great Lakes valued at over \$300 million, the first commercial harvest of cultured shrimp, and a system to use deep, cold ocean water as an aquacultural nutrient source.

The program also has solid Federal support. Robert White, head of the National Oceanic and Atmospheric Administration, which manages the program, says that NOAA attaches "the highest priority" to the Sea Grant Program, pointing out that, once having been allocated \$15 million (a \$2 million increase over its base in the President's budget), the Sea Grant Program has never been considered for any cut—the only program in all of NOAA so favored. In fact, Congress tacked on an additional \$2.5 million.

In spite of all this, the Madison conferees seemed unelated. In sessions on coastal zone programs, ocean engineering, aquaculture, legal-economic aspects of fisheries, and advisory services, most of the time was devoted to discussion of the problem or subject in general; the question of Sea Grant's potential contribution was answered in only very general terms.

In the legal-problems area, for example, it was decided to continue support of scientific research, develop new programs to send results to users, study institutional barriers to effective national fisheries policy (such as archaic state laws), analyze fishing industry interests from the point of view of the individual fisherman, and provide inputs to national policy and to



Duane Hopp/Univ. of Wis.

White (left) and Hollings: Strong supporters, but for different reasons.

decision-makers framing national policy. The aquaculture group proposed better assessment of what species will soon be ready for cultivation, better communication and coordination on a national level, and establishment of aquacultural research stations.

In ocean engineering, the preponderant feeling was that Sea Grant is not accomplishing what it should. Specific suggestions were to establish cooperative programs in which students would move back and forth between university and industry, industrial sabbaticals for faculty, and cooperative research with industry. Almost all the sessions felt that committees should be set up to study further the potential contributions of Sea Grant and to coordinate Sea Grant efforts in the different areas.

David Potter, chief engineer of Delco Electronics and a former member of the National Sea Grant Program Advisory Panel, was highly critical of the program's accomplishments to date. Though he confessed that in a sense he was acting as a benevolent gadfly in offering his criticisms, he does feel that the program has not lived up to its potential.

Another conference speaker, Sen. Ernest F. Hollings (D-S.C.), one of Sea Grant's strongest Congressional backers, seems to see the program as a means of increasing the U.S. sea power. He warned conferees that the Soviet Union is ahead in the development of nuclear powered submarines and fishing fleets and the Japanese are ahead in exploiting the oceans' resources. "National security has been needlessly jeopardized," he says.

The Sea Grant Program is extremely broad, and perhaps therein lies the reason for misunderstandings as to what it can and should accomplish, as well as the reason it has gone relatively unhealed. For a young program with admittedly modest funding, the Sea Grant Program's record is impressive. But its contributions have been in the form of the small increments of knowledge that add to man's basic understanding of his environment rather than isolated spectacular achievements. Like the land-grant concept after which it is modeled, it aims at the direct involvement of scholars in the practical problems of the marine environment. And, as White pointed out, the program is just beginning.

Still, there seems to be a need for finer focus; Sea Grant may be spreading itself too thin. Marine problems are competing for public attention with many other pressing problems, and popular support is necessary for continuance of any program. Some Sea Grant spokesmen feel that sizable increases in funding will have to be made for Sea Grant to flourish. □

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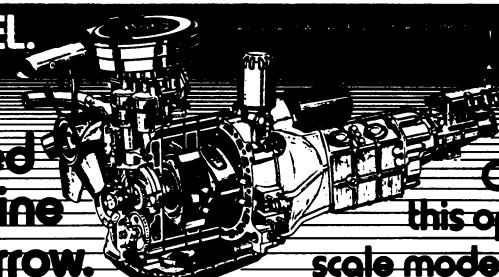
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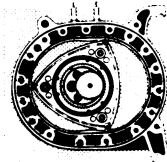
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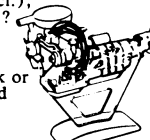
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