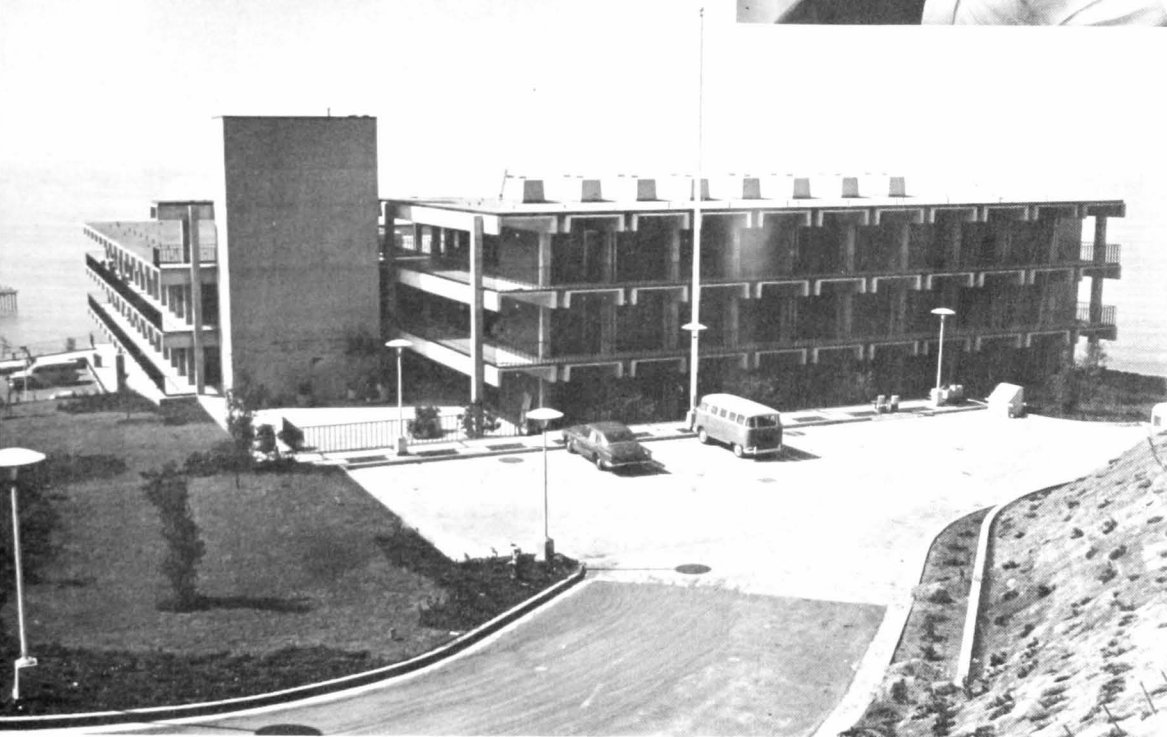


# GRADUATE EDUCATIONAL GRANTS IN AQUATIC SCIENCES

Academic year 1966-67



UNITED STATES DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
BUREAU OF COMMERCIAL FISHERIES

Washington, D. C.

Fishery Leaflet 587

October 1965

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Experimental "trouser leg" cod end net on the R/V Kaho in the Great Lakes. Each "leg" is made of a different size mesh permitting simultaneous sampling to determine the most efficient gear for capture of desired size and species of fish.

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Cover: The Bureau's Fishery-Oceanography Center, La Jolla, California, houses its California Current Resources and Tuna Resources Laboratories, the Inter-American Tropical Tuna Commission, Scripps Tuna Oceanography Research, Coordinator of the California Cooperative Oceanic Fishery Investigations, and a field station of the U.S. Geological Survey.

Warburg respirometer used in study of oxygen consumption of marine organisms (California Current Resources Laboratory)

# UNITED STATES DEPARTMENT OF THE INTERIOR

Stewart L. Udall, *Secretary*

John A. Carver, Jr., *Under Secretary*

Stanley A. Cain, *Assistant Secretary for Fish and Wildlife and Parks*

FISH AND WILDLIFE SERVICE, Clarence F. Pautzke, *Commissioner*

BUREAU OF COMMERCIAL FISHERIES, Donald L. McKernan, *Director*

## GRADUATE EDUCATIONAL GRANTS IN AQUATIC SCIENCES

The Bureau of Commercial Fisheries, Fish and Wildlife Service, U. S. Department of the Interior, invites applications from colleges and universities for Graduate Educational Grants in Aquatic Sciences to be awarded for the academic year 1966-67.

### Who May Apply

Applications will be considered only from institutions of higher learning in the United States that offer a full-time curriculum leading to the doctorate. Application should be made by an authorized officer of the institution. Students should not apply to the Bureau; they will be selected by their institutions. Selection must be made without discrimination as to race, creed, color, sex, or national origin. The student must be a U. S. citizen or owe allegiance to the United States. He or she must be working toward a doctorate.

### Field of Study

The grants are designed to support studies in fishery science or other fields pertinent to fishery science. Basic and applied studies in a variety of disciplines are appropriate to the purpose of the grants. The following subjects are the preferred disciplines to be considered for support. Other subjects will receive consideration, however, if their relevance to fishery science is made clear in the application.



Figure 1.--Serological research offers improved techniques for identifying subpopulations of fishes. Blackback flounders are used in the Biological Laboratory, Woods Hole, Massachusetts for serological experiments.

Biological Oceanography (including fishery biology, marine biology, and taxonomy of marine invertebrates)

Chemical Oceanography; Physical Oceanography

Ocean Engineering (fishing gear and equipment, quantitative sampling devices, environmental measuring devices, new techniques for locating and catching fish)

Limnology

Fishery Economics

Technology of Fishery Products (deterioration of fish oils and other fishery products; chemistry of oxidation of fishery products; chemical and physical aspects of fishery products; chemistry of protein denaturation; nutritional characteristics; microbiology relative to spoilage)

### **Stipend and Duration of Grants**

Grants will include:

- (1) \$3,000 cost-of-living allowance for the student
- (2) \$1,000 additional cost-of-living allowance for married student with children

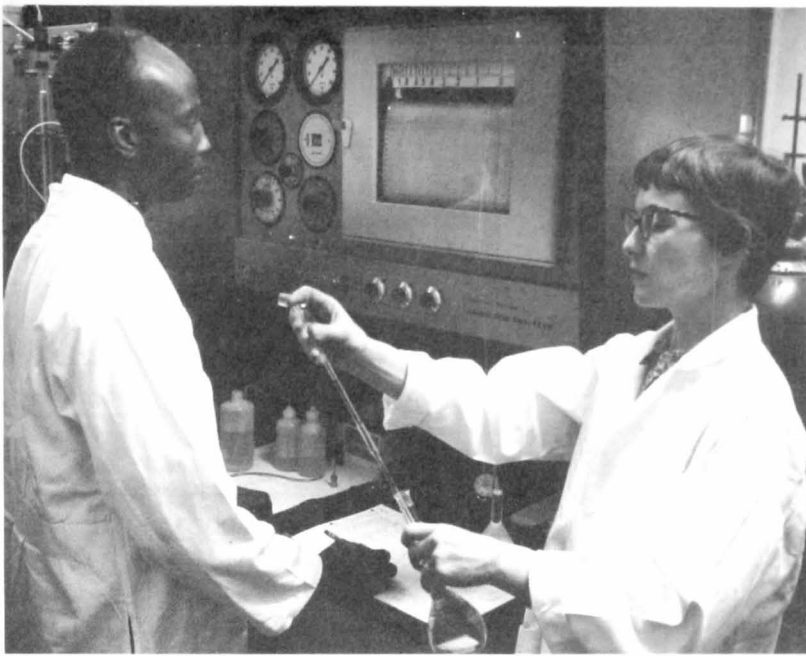


Figure 2.--Bureau of Commercial Fisheries scientists preparing to place a sample on the column of an amino acid analyzer at the Fisheries Technological Laboratory, College Park, Maryland.

- (3) Tuition and fees
- (4) \$500 annual administrative allowance to the institution for each student

Grants will be awarded to cover 1 or 2 years of study on a 12-month basis. Certification of satisfactory progress is required at the end of the first year of study for those students who receive 2-year grants. The number of years of support for any one student is limited to 2 years.

### **Obligations of Grant Tenure**

Each student supported by a Bureau of Commercial Fisheries Graduate Educational Grant will be required to work full time on his degree program on a 12-month basis, including such teaching and field work as the institution believes to be necessary for his academic progress. Such students, therefore, may be permitted to engage in a limited amount of teaching without having to obtain Bureau approval. A student may not receive additional remuneration from another fellowship, assistantship, scholarship, or similar award or Federal grant or contract during his tenure. If the institution believes it will be beneficial to his academic progress, and so certifies in advance, a student may take other employment during the summer. However, the annual 12-month stipend will be reduced on a pro rata basis for each month of approved summer employment. If the institution has no formal summer session, the student must make special arrangements for super-

vised study or research at his institution or other appropriate institution. If extended travel is contemplated for the purpose of examining material in museums or for other reasons, the Bureau should be consulted in advance. Once accepted a student may enter on tenure of his grant any time after June 1, 1966, but must begin no later than the beginning of the 1966-67 academic year. After an award is made a major change in course of study or tenure requires prior approval of the Bureau of Commercial Fisheries.

### **Where to Apply**

Applications for grants should be addressed to the Director, Bureau of Commercial Fisheries, Fish and Wildlife Service, U. S. Department of the Interior, Washington, D. C. 20240. Copies of terms and conditions to be included in a grant are available upon request.

### **When to Apply**

The final date for submission of applications will be December 15, 1965. Applications mailed after that date will not be considered.

### **How to Apply**

Compliance with Title 6 of the Civil Rights Act of 1964 will be required of each institution that receives an award. A copy of the statement of assurance of compliance with Title 6 will be furnished upon request.

The following information is required for each application:

1. Name of college or university.
2. Name of department.
3. Address
4. Brief description of field of study for which the grant is desired. Sufficient detail should be furnished to indicate its relevance to fishery science.
5. Name, specialty, and degrees of faculty member or members who would supervise the grant for which application is made.
6. Other faculty members in the department, their degrees and their fields of specialty.
7. Estimated tuition and fees. (Total for the academic year of 12 months including summer session.)
8. Numbers of graduate students currently in residence in the department making application and the degrees toward which they are working.

9. Numbers of doctoral degrees conferred in the past 5 years by the department making application, the major field of study, and the title or thesis for each.

This information will be used to judge the kind of training offered by the faculty or the department making application.

### Number of Applications

Separate requests must be submitted for grants in each discipline. For example, if an institution requests support for four students in Fishery Biology and one student in Physical Oceanography, two separate applications must be furnished. Eight copies of each application are needed (six of them are for the use of the reviewing panel). Only one set of supporting data, such as curriculum bulletins, need be submitted for each department making application. Since only a limited number of awards is possible, it is suggested that each department limit its request to two grants.

### Selection and Awards

Final selections will be made in January 1966. Announcement of awards is scheduled for March 1, 1966.

MS. #1514



Figure 3.--Fishery scientists of the Tuna Resources Laboratory in cooperation with the Bureau's Oceanographic Instrumentation Unit and private industry conduct experiments with the use of tethered hot air balloons on fishing vessels to aid in detection of tuna and other pelagic fish schools.

Created in 1849 the Department of the Interior--a department of conservation--is concerned with the management, conservation, and development of the Nation's water, fish, wildlife, mineral, forest, and park and recreational resources. It also has major responsibilities for Indian and Territorial affairs.

As the Nation's principal conservation agency, the Department works to assure that nonrenewable resources are developed and used wisely, that park and recreational resources are conserved for the future, and that renewable resources make their full contribution to the progress, prosperity, and security of the United States--now and in the future.



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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
BUREAU OF COMMERCIAL FISHERIES  
WASHINGTON, D.C. 20240

POSTAGE AND FEES PAID  
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