Announcement of the

VIRGINIA FISHERIES LABORATORY

of the

College of William and Mary and Commission
of Fisheries in Virginia

Issued for Prospective Students and
Visiting Investigators

Digging for Clams

TEACHING AND RESEARCH PROGRAMS IN
AQUATIC BIOLOGY

Williamsburg and Yorktown, Virginia
MARCH, 1948
LOCATION

The main field station of the Virginia Fisheries Laboratory is located at Yorktown near the mouth of the York River on Lower Chesapeake Bay.

Laboratory Experiments on Blue Crab Larvae

Other laboratory and teaching facilities and a central office are maintained on the campus of the College in Williamsburg. A thirteen-mile parkway links these two centers; consequently, the proximity between marine station and academic center is quite unique and favorable. Located on a peninsula between the York and James Rivers and almost on Chesapeake Bay, these centers offer a variety of favorable habitats ranging from marine to freshwater conditions.
CURRICULUM

Educational efforts include a diversity of extension activities plus courses offered at the College of William and Mary on campus and as extension activities. An undergraduate at the College, who is interested in Aquatic Biology, may concentrate in Biology and take the sequence designated for this specialty. A graduate student with such interests is offered a Master of Arts program in Aquatic Biology.

1 B.S. sequence for students of Aquatic Biology. Courses in Biology should include 301, 304 or 305, 315, 316, and at least six credits from Biology 201, 202, and 401. Attention is called to the courses in Chemistry and Physics prerequisite for these courses.

1 M.A. in Aquatic Biology. The student must take, or have taken prior to graduate work, a course in each of the following: Invertebrate Zoology, Physiology, Hydrobiology, Genetics, Plant Ecology, Biology of Fishes, Fisheries Biology, Scientific Literature, Aquatic Biology Seminar, Chemical Oceanography. He must also have the prerequisites to these subjects as described in the College catalogue. He must be in residence at least one regular session or four summer sessions of nine weeks. He must present a thesis approved by the Department of Biology.

College of William and Mary Catalogue Descriptions of Courses Directly Involved

(The following courses are offered during the regular college session as indicated and according to anticipated needs during the summer session. In courses involving aquatic studies, numerous trips are taken to the Yorktown station and other field points. Occasionally, by special arrangement, entire courses are given at Yorktown, especially during the summer.)

First semester; lectures two hours; laboratory six hours; four credits.

Second semester; lectures two hours; laboratory six hours; four credits.

Biol. 301. Bacteriology and Public Health. Prerequisite, Zoology or Botany, and General Chemistry.
First semester; lectures three hours; laboratory four hours; four credits.

Biol. 304. Human Physiology. Prerequisites, Zoology and General Chemistry. It will be advantageous to have taken, or to take with this course, Comparative Anatomy of Vertebrates, Organic Chemistry, and Physics.
Second semester; lectures three hours; laboratory four hours; four credits.

Biol. 305. Plant Physiology. Prerequisite, Elementary Botany and Elementary Chemistry.
First semester; lectures three hours; laboratory four hours; four credits. Usually alternates with Biol. 207.

Second semester; lectures three hours; laboratory four hours; four credits. (Offered as facilities permit and demand warrants.)

Biol. 315. Invertebrate Zoology. Prerequisite, Zoology.
First semester; lectures two hours; laboratory six hours; four credits.

Second semester; lectures two hours; laboratory six hours; four credits. Usually alternates with Biol. 408.
Biotic, physical and chemical factors of the aquatic environment including certain fundamental principles of oceanography. Special attention is given to conditions in the Chesapeake Bay. Full and half-day field trips will be arranged and required.

First semester; lectures three hours; three credits; four hours of laboratory work may be taken, thereby increasing the credits to four.

2 Biol. 403. Problems in Biology. Staff of Department of Biology and Virginia Fisheries Laboratory.
Any semester; hours to be arranged; credits according to work done.
The work of this course is strictly individual and varies with the interests and needs of advanced students. Those interested should consult the instructors before registering and, if possible, some months in advance.

Semester by arrangement; lecture three hours; laboratory three hours; four credits.
Methods directly applied to the study of fishery organisms.

2 Biol. 407. Scientific Literature. Prerequisite, senior standing as a concentrator in science.
First semester; lecture two hours; two credits.
Training in the use of scientific literature as a tool for research and education. The student will learn how to prepare and maintain bibliographies.

1 For a more authoritative, complete statement of this program see the Catalogue of the College of William and Mary, obtainable on request from the Registrar.

2 Consent of the instructor is required for admission to these courses.
Biol. 408. Biology of Fishes. Prerequisite: 13 credits in Biology; Comparative Anatomy of Vertebrates is desirable. Mr. Marshall and Mr. Van Engel.

Second semester; lecture two hours; laboratory six hours; four credits. Usually alternates with Biol. 316.

An introduction to the general biology of the finfishes. Taxonomy, breeding habits, food habits and growth are studied and research techniques applicable to the group are introduced. Full and half-day field trips will be arranged and required.


All semesters; hours by arrangement; one credit each semester.

Must be taken by graduate students in Aquatic Biology all semesters in residence. Staff and visiting investigators at the Laboratory are most welcome to participate.

Chem. 409. Problems in Chemistry.

Any semester; hours to be arranged; credits according to the work accomplished.

This course is for the advanced student and is strictly individual. Those interested must consult the instructor before registering and, if possible, several months in advance. Emphasis on problems in the analysis of sea water is offered when taken under Dr. Armstrong.

### TUITION, ROOMS FOR STUDENTS, Etc.

(Students who present themselves for registration without making preliminary arrangements with the Auditor’s Office must come prepared to pay their accounts in full or be subject to delayed registration.)

#### REGULAR SESSION

Tuition and a General Fee, which includes payment for recreational and health facilities, equal $110.00 for State students and $190.00 for Out-of-State students per semester.

The College operates a large modern cafeteria and special dining halls at higher rates for those wishing table service. With certain reasonable exceptions, all students must board in these regular dining halls. Each student of the College will be billed for board at the rate of $1.00 per diem for each day of residence in the semester, not including the vacation period. This requirement will not care for the total number of meals, since average board is somewhat greater. The requirement of $1.00 per diem, however, permits a student to take occasional meals at other eating establishments in Williamsburg. This required board charge will vary from $120 to $130 per semester.

### SUMMER SESSION

Virginia teachers (those who taught in public schools in Virginia during the preceding session and who expect to continue teaching in Virginia) $2.50 per semester hour of credit

Other Virginia students $5.00 per semester hour of credit

Students from other states $9.50 per semester hour of credit

(Teachers from other states are eligible for scholarships varying from $25.00 to $50.00 for the session. Application should be made to the Director of the Summer Session.)

The College cafeteria is open for optional use by students during the summer session.

### ROOMS

Rooms for the regular session range from $40.00 to $125.00 a semester. For new students these are handled through correspondence with the Admissions Committee mentioned below. Rooms for the summer session range from about $5.50 to $6.00 a week. Reservations are made by applying to the Director of the Summer Session. Graduate students who, after correspondence with the Director of the Virginia Fisheries Laboratory, find it convenient to live in Yorktown may do so by assuming independent responsibility for room and board. The Laboratory staff will gladly help such people find accommodations.

### ADMISSION OF STUDENTS

All applicants for admission to the regular session must present their applications on printed forms secured from the office of the Chairman of the Committee on Admissions. Early application is highly recommended. Application for admission to the summer session only should be submitted to the Director of the Summer Session.

### VISITING INVESTIGATORS

Independent investigators interested in working at the Laboratory at any time during the year should communicate with the Director. If contacted well in advance, the Laboratory staff can offer greater assistance in arranging for housing, equipment, facilities, etc.

Ph. D. candidates from other academic institutions may likewise arrange to use the facilities of the Laboratory for their graduate research. Requests for such arrangements should be made by the student’s major professor or with his full knowledge and consent.

### FINANCIAL ASSISTANCE

Two graduate assistantships of $100 a month, demanding approximately fifteen hours service a week, are available. It is estimated that this remuneration will defray the major part of a student’s tuition and basic living expenses. Application for these assistantships should be made to the Director of the Laboratory. Decisions relative to summer session applicants will be made by the preceding April 15 and relative to the regular session by the preceding June 1st, if possible.
EXTENSION CURRICULUM BY THE STAFF OF THE
VIRGINIA FISHERIES LABORATORY

The following course is offered at appropriate localities in Tidewater Virginia for teachers and others qualified to study for college credit. Correspondence relative to planning such a course for a given locality should be addressed to the Director of Extension at the College of William and Mary.


_Seventeen two-hour meetings for lectures, demonstrations and field trips; two credits._

A course in general aquatic biology. Emphasis is placed on the biota of local aquatic environments of special interest to inhabitants of the Tidewater area. Attention is directed to the principles of resource use.

Tuition for students enrolled in the course will be $15.00 plus a $5.00 registration fee. The registration fee will be remitted for Virginia teachers.