

for solution of essential problems of marine engineering, including the use of marine power plants operating at high pressures and temperatures. There is also the problem of the application of Diesel engines with hydraulic, electrical or gear drive, the solution of which involves familiarity with its thermal, metallurgical and mechanical limitations.

The basic objective of the course is to give the student a unified and scientific approach to engineering problems within this field, with special emphasis on investigation of fundamental methods of analysis applied to new problems in marine engineering. Cooperating in the course, in addition to the department of naval architecture and marine engineering, will be the departments of mechanical and electrical engineering. The entire resources of the institute will be available for various aspects of the training.

Professors Evers Burtner, Lawrence B. Chapman, Frank M. Lewis, all members of the staff of the Pratt School of Naval Architecture, will give instruction in advanced marine engineering and mechanical vibration in ships, and Professor Lewis will give special attention to instruction in propeller theory and experimental research in this field. Professor Harold L. Hazen, head of the department of electrical engineering, will have charge of advanced problems in his subject; Professor C. Richard Soderberg, of the department of mechanical engineering, a designer of heavy power machinery, will devote his attention to advanced problems in mechanical engineering; the subject of internal combustion engines, particularly Diesel power plants, will be covered by Professor C. Fayette Taylor, one of the leading authorities in engine design; instruction in heat transfer will be given by Professor William H. McAdams, of the department of chemical engineering.

#### THE NEW RESEARCH VESSEL OF THE BUREAU OF FISHERIES

AIDED by the commercial fishing industry, the Bureau of Fisheries is about to place in service a first-class research vessel for offshore work in the North Atlantic. Through the cooperative interest of the General Seafoods Corporation of Boston, arrangements are being made for the transfer of the *Harvard*, a 152½-foot trawler, to the Bureau of Fisheries. As soon as the transfer of the vessel has been completed, Public Works Administration funds to the amount of \$125,000, allotted late in June, will be made available for the reconditioning and outfitting of the vessel.

Repairs and alterations to the hull and superstructure and installation of equipment for oceanographic studies and experimental fishing are expected to be completed in time to put the vessel into operation on the fishing grounds next summer. Since the *Albatross II* was taken out of service because of lack of operating

funds in 1932, the Bureau of Fisheries has possessed no ship suitable for use on the fishing banks of the Atlantic.

One of the most important problems to be studied with the aid of the new research facilities will be that of maintaining stocks of fish on the nearer banks, a day's run from the New England ports. Under intensive fishing, supplies of haddock in the Georges Bank area have been so reduced in recent years that it has been necessary for much of the fleet to operate on the distant Nova Scotian banks.

As a result of several years' investigation of the haddock fishery, William C. Herrington, in charge of the biological fishery investigations in the North Atlantic area, last fall announced a theoretical basis for operating the haddock fishery of Georges Bank at a level that would maintain a stable yield and guard against reduction of the basic stock. With the aid of a seagoing research vessel, Mr. Herrington and his staff now expect to determine the actual poundage that represents the optimum yield for the haddock fishery.

The program of investigations to be carried out includes an annual survey of the fishing grounds from Nantucket Shoals to the Laurentian Channel to discover the localities in which the greatest numbers of fish are concentrated.

With gear to be installed in the new vessel, biologists will be able to make a census of young haddock too small to be caught in commercial nets. Experiments will be undertaken with commercial fishing gear to develop and encourage the use of nets of a type that will release undersized fish without loss of marketable sizes.

Fluctuations in the catch of mackerel, which may vary more than 50 per cent. from year to year, have been shown by past investigations of the Bureau of Fisheries to be closely linked with the fate of young mackerel during the first months of their lives. It is now planned to make definite measurements of the effects of oceanic conditions on the survival of the young; and to make annual censuses of the newly hatched and one-year-old mackerel so that it may advise the industry whether to expect good or poor fishing. Cruises are also contemplated to discover the location of schools of adult mackerel in years when they do not congregate in the usual areas, as happened in 1937. Tagging of mackerel will be done at sea to further explore the movements of the fish.

#### THE ASSOCIATION FOR THE STUDY OF SYSTEMATICS IN RELATION TO GENERAL BIOLOGY

THE Association for the Study of Systematics in Relation to General Biology has issued, according to the *London Times*, a statement in regard to its aims and constitution. Hitherto its constitution has been as

loose as possible, and there has been no subscription. In spite of this, useful work has been done, discussions have been organized in connection with the Zoological Society, the Linnean Society and the British Association, and "The New Systematics," a book of essays on recent progress in taxonomy in relation to other branches of biology, edited by Dr. Julian Huxley, will be published soon by the Oxford University Press.

It has now, however, been decided that, in order that the association may function still more effectively, a regular income is necessary, and a subscription of 5s. a year has been fixed for the first three years. An agreement has been made with the Linnean Society, whereby the association may use the society's rooms for meetings, joint discussions are to be held, and the annual report will appear in the *Proceedings* of the Linnean Society.

The general aim of the association is to remedy the isolation which modern specialization has inevitably created in the various branches of biology. Its objects include the study of the bases and practical aims of taxonomy; the examination of the criteria employed in defining species and other systematic categories; the consideration of modifications of the existing categories in the light of various branches of specialized research; the promotion of research; the investigation of methods of teaching systematics; and the promotion of cooperation between workers in different branches of biology and taxonomic problems. The association plans eventually to produce a uniform series of handbooks on the British fauna and flora.

The chairman of the association is Dr. Julian Huxley; J. S. L. Gilmour is botanical secretary; H. W. Parker, zoological secretary, and Dr. J. Smart, treasurer. The address of the treasurer is care of the British Museum (Natural History), London, S.W. 7.

#### THE INTERNATIONAL CONGRESS OF GENETICS

BEFORE the opening of the International Congress of Genetics at Edinburgh a special cable to *The New York Times*, signed by Ritchie Calder, reported that Professor N. I. Vavilov, president of the congress, together with fifty of his colleagues had withdrawn from the congress and that Soviet science would not be represented either by a delegation or by individuals. The official explanation, contained in a letter to Professor F. A. E. Crew, secretary-general of the congress, is that the Russians could not participate because the congress should have been held in Moscow instead of Edinburgh.

Mr. Calder wrote that this announcement, which was received on the eve of the congress, came as a complete surprise. Two years ago plans to hold the congress in Moscow were abandoned because of differences and restrictions that foreign geneticists could not

accept. By a decision of the international committee that organizes the congress, the meeting was transferred to Edinburgh, but it was also decided that the president should be Professor Vavilov as arranged and that the Russians should have a dominant part in the proceedings.

Three weeks before the opening, Professor Vavilov, who for eighteen months had been actively participating in the arrangements, discovered that the project for meeting in Moscow had not been "abandoned" but only "postponed" and that the Edinburgh proceedings were therefore out of order.

Russian papers, including the presidential address, had been received and printed. They had to be suppressed and all the program had to be readjusted and reissued to close the fifty gaps caused by this wholesale retreat.

No one, according to the *Times*, seriously accepted the official explanation. It is known that there have been growing differences of opinion among Russian geneticists, and one section is demanding "Marxist genetics." Thus Soviet biology has become involved with ideology.

It is also thought that the turn of international events has had some bearing on the fact that the Russians had not received their passports.

About a quarter of the German geneticists had also withdrawn. Six out of twelve members in the field of human genetics were "unable to attend," but thirty-two were expected to be present at the opening of the Congress. One of the principal papers planned for that day was a study of heredity and environment through identical twins by Professor Fritz Lenz, of Berlin. About twenty Italians were expected to take part. The American contingent numbered 120, and there were large delegations from France, the Netherlands and Scandinavia.

#### OPENING OF THE INTERNATIONAL CONGRESS FOR MICROBIOLOGY

THE third International Congress for Microbiology opened at the Waldorf-Astoria Hotel, New York City, on September 2. According to the *New York Herald Tribune* many scientific men from abroad who expected to be present were unable to attend and others must return as soon as transportation can be arranged.

Nearly all the forty-two official delegates designated by the German government actually sailed on the Hamburg-American liner *Hansa*, but the boat was recalled to Hamburg. Several official delegates designated by the Italian Government were to have sailed on the Italian liner *Conte di Savoia*, but the sailing was cancelled, and the ship is still in Naples.

Some of those who were unable to attend were already in the service of their governments. Among these is Dr. G. Ramon, director of the Pasteur Insti-