GENERAL SCIENCE

Foundation Bill Passes

Nominations for the governing board of the Science Foundation are being made. The director will be appointed by the President with approval of Senate.

➤ NOMINATIONS for the 24-member Board that will govern the National Science Foundation are now being received by President Truman.

The recently passed legislation requests the President to give "due consideration" to recommendations for Board membership submitted to him by the National Academy of Sciences, the Association of Land Grant Colleges and Universities, the National Association of State Universities, the Association of American Colleges and by "other scientific or educational organizations."

Director of the Foundation will be appointed by the President, with the "advice and consent of the Senate." According to the law, however, his appointment shall not be made until the Board has had time to submit its recommendations for that post to the President. The Director of the Foundation will receive $15,000 per year, and serve for six years. He is an ex-officio member of the Board.

Final authority to sign contracts as well as to grant scholarships and fellowships will remain with the Board. Although this makes administration of the act rather clumsy, it is not expected that it will be important during the first year of operation since it is doubtful if any contracts or student aid will be given out with the $500,000 provided for the first year's budget.

The law authorizes the Board to set up an Executive Committee. Signing of contracts and granting of scholarships and fellowships remains vested in the Board, however. Committee members will serve for a two-year period. Board members serve for six years.

Congress must still pass the appropriation bill to make available the money authorized for actual operation of the Science Foundation.

The bill received bipartisan support in both houses. It was among the bills listed by President Truman as "must" legislation for this year. A previous bill was pocket vetoed by the President in 1947 because he objected to the administrative procedures it set up.

A federal science body to support basic scientific research was first proposed six years ago. Since 1946 it has been a part of President Truman's domestic postwar program and before Congress continually.

House and Senate conferees knocked out of the House-passed bill the controversial, extremely stringent loyalty provisions. The new bill calls for FBI clearance of persons doing work connected with atomic matters in the same manner as those working for the Atomic Energy Commission.

Likewise, scientists doing classified research for the Defense Department would come under that agency's security regulations.

Holders of fellowships and scholarships would be required to file the normal loyalty affidavit and also sign the loyalty oath. The affidavit states that ". . . he does not believe in, and is not a member of and does not support any organization that believes in or teaches, the overthrow of the United States Government by force or violence or by any illegal or unconstitutional methods." The oath is: "I do solemnly swear (or affirm) that I will bear true faith and allegiance to the United States of America and will support and defend the Constitution and laws of the United States against all its enemies, foreign and domestic."

Science News Letter, May 6, 1950

ENGINEERING

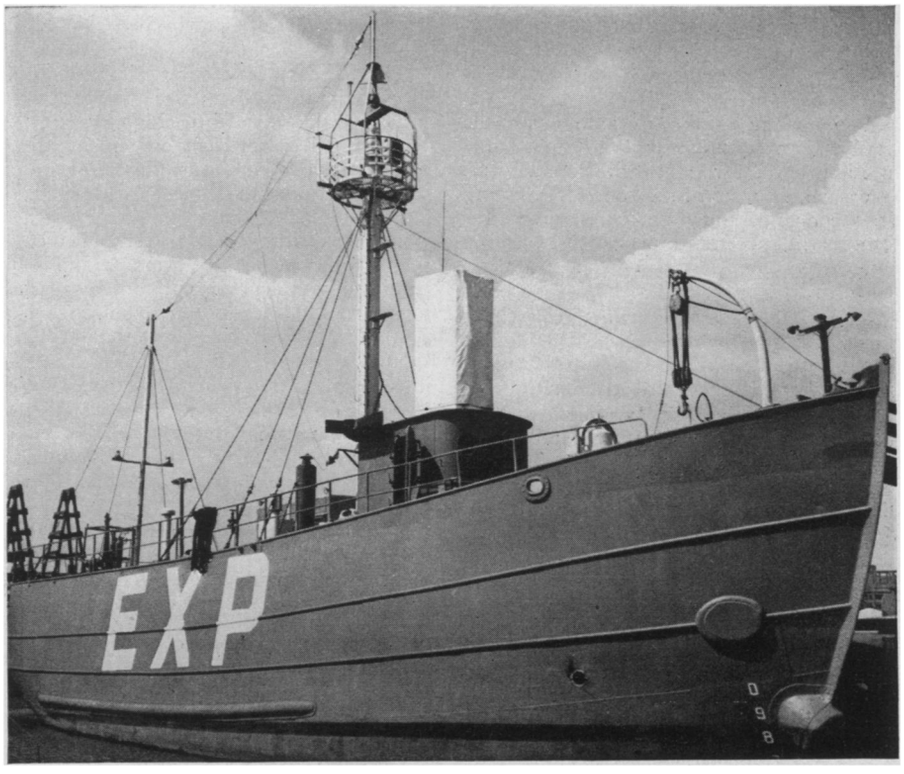
Crewless Ship for Channel

➤ A COAST Guard lightship without a man aboard will be put into service off New York harbor this summer. One man at a remote control panel on Sandy Hook, N. J., will operate its light, radiobeacon and fog signal.

Named the EXP-99, the 91-foot, 215-ton vessel is now undergoing machinery tests at Curtis Bay, Md., just south of Baltimore. After a two-month trial, the crewless ship will be stationed near Scotland Light Vessel, one of the three lightships now marking the sea approaches to New York.

Three diesel-powered generators will supply the electricity for the ship's powerful navigational aids. The operator on shore, by a flip of the finger, will be able to start, stop or shift generators through a radio signal.

With another button he can turn the fog signal on or off. The ship will carry two radio-beacon transmitters, shifting automat-



NOT ONE MAN ABOARD—Unique among the 37 manned lightships operated by the Coast Guard in U. S. shipping lanes will be Experimental Lightship 99, the lightship without a crew.

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ically in case one should break down. The 10,000-candlepower light will have twin lenses. If both lights should burn out, a battery-powered emergency light would cut in. A signal will tell the shore operator that the main light is out.

EXP-99 carries no engines. It will have to be towed to its station and anchored. But by eliminating the 17-man crew normally carried on each of the 37 Coast Guard lightships now in service, the taxpayer will save nearly $60,000 a year in operating costs and a third of a million dollars in the cost of the ship itself ($375,000 as against $750,000 for a manned lightship).

The ship will not sink, the Coast Guard adds. An automatic pump will keep water in the bilges at a safe low level. Enough fuel will be carried to allow the ship to remain on station, unattended, for nine months, with each of the three generators operating continuously for three months.

The new ship will be the first such crewless U.S. lightship in ocean use. The idea is not new, however. From 1935 until 1939 the Coast Guard operated such a craft in Lake St. Clair, a small lake in the rivers connecting Lake Huron and Lake Erie.

If EXP-99 gives satisfactory service, the Coast Guard said, it may lead to the gradual replacement of all manned lightships.

Lightships are used where a powerful light is needed, yet the water is too deep to build a lighthouse. Engineering developments in off-shore oil drilling structures in the Gulf of Mexico, however, may someday make deep-sea construction practical and all lightships obsolete.

Science News Letter, May 6, 1950

MEDICINE

From Now On: Polio

The greatest research drive in history may produce the answer to the polio enigma in the next 50 years. Over 42,000 were polio victims in the year 1949.

By WATSON DAVIS

Sixth of a series of glances forward in science.

➤ HEART disease and cancer are great killers, largely unconquered. But probably the most intensely studied disease today is infantile paralysis, thanks to the march of dimes.

Poliomyelitis is also close to being the least known, scientifically. We do not know precisely its cause, although it is a virus. We have no practical method of preventing it. We do not know how it is spread, except that it is person to person. We have no cure for it, only symptomatic treatment, effective in many cases.

Some 200 scientists are now researching upon phases of the disease and 510 projects in 91 institutions have been underway in the 11 years of this great polio campaign.

Most of the dime money is used to treat those who need the expensive and extensive nursing and medical care that can often restore them to useful life. The national polio push is unique in giving patient care when and where needed. Never before have so many been ill of polio, due to the unhappy burst of cases last year, some 42,375 boys and girls, men and women. This is quadruple the number expected for a more or less normal year, although the guess for 1950 is some 25,000.

As in any disaster, care of the injured is a first consideration. But safety and prevention is the proper long-time endeavor. This is the task of research, although success may be long in arriving and the detours always are many. Thus millions of dollars of the public's dime money go for research while tens of millions go for actual treatment.

In past years there have been high hopes for preventive measures, such as vaccines, and even wondrous cures, through chemicals. Not yet are these possible. There is confidence that these will be achieved in the future.

There are at least three kinds of polio virus, immunity to no one of which will protect against the others. Monkeys are the only animal except man on which experiments can be done, and they cost much money. Despite this, the next few years may bring an effective protective vaccine. Combined with a test to tell whether a person already has the kind of infantile paralysis prevalent, a protective vaccine might control the disease as influenza can similarly be checked.

Numerically the disease is not rated a major one, yet four out of five people over 15 years of age have had contact with the virus judging from the polio antibodies in their blood. Millions actually get the disease without seeing a doctor or ever knowing it.

Chemicals, like the sulfa drugs and penicillin, have conquered many diseases. It is not over-optimistic to hope that one of them will be found that will stop the polio virus before it invades the nerve cells and causes crippling or death. False alarms of such success should not blind us to this possibility.

Until research provides the weapons against the disease itself, the care of patients must go on. Many now walk and lead useful lives thanks to methods of physical medicine developed in the past few years.

For the future, continuing the research drive now in progress, there will be attempts to:

A. Find exactly where the viruses arise, how they are spread and then do something about preventing them from coming into contact with people.

B. Discover some drug to destroy the disease once it invades, keeping it from destroying the nerve cells, causing crippling or death.

C. Explore and perfect immunization against the disease so that it can be prevented like smallpox.

D. Discover still better methods of treatment.

Science News Letter, May 6, 1950

GENETICS

Yellow Siamese Cats, Gentler than Blue, Bred

➤ DON'T start wondering if you should see a Siamese cat that is yellow instead of the usual seal color or bluish sort.

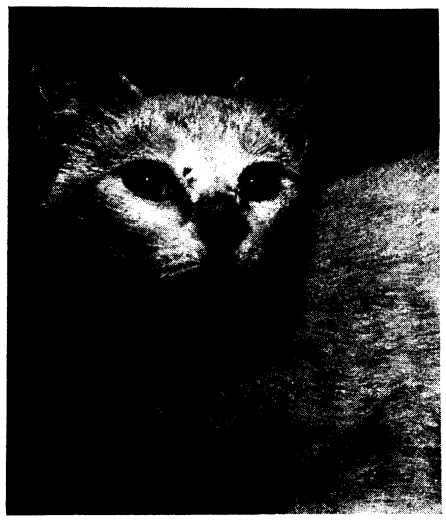
Scientific application of heredity has produced such yellow Siamese cats at the Jackson Memorial Laboratory, Bar Harbor, Me.

The new kind of kitty has a pale pastel, straw colored body, deep orange ears, feet and tail. It looks at you with clear blue eyes.

With the change in color, there has come a very affectionate and gentle disposition and less aggressiveness than in the usual breed. Only a few of the yellow Siamese cats have been produced, and the new gentleness may not hold true when larger numbers are raised.

When a sufficient number of this new kind of cat are available to be distributed, its striking and handsome appearance is expected to create a sensation among cat fanciers.

Science News Letter, May 6, 1950



BLONDE FELINE — Product of scientific breeding, the yellow Siamese cat is reputed to be more affectionate, more gentle and less aggressive than the blue Siamese.