periods of years and which must be continued in order to gain the desired results.

5. As between new investigations which may be expected to yield returns after a long period of years and those which may be expected to produce results in time to serve the immediate needs of the country, preference will be given to the latter.

6. In the latter class are studies—biological, biochemical, physiological and technological—relating to the propagation and rearing of fish, the protection of fish, the utilization of fishery products, etc.

7. The bureau is not only utilizing its permanent scientific staff to the fullest extent, but is gladly availing itself of the valuable assistance offered by biologists, physiologists and chemists from various universities.

8. For the immediate present certain economies are being practised. This does not mean a policy of niggardliness; on the contrary, expenditures must in many respects be more liberal than hitherto. It does mean, however, the temporary curtailment or cessation of certain customary activities which can not be continued in a satisfactory manner during the immediate period of necessary readjustment.

More specifically the bureau's plans for scientific work in the near future may be stated as follows:

The marine laboratory at Beaufort, N. C., will not be opened for general investigations during the coming summer. The Woods Hole laboratory, while temporarily closed for general investigations, will have a small special staff for experimental work in the utilization of fishery products. The fish-culture experiment work of the Fairport, Iowa, laboratory bears so directly upon the immediate problems of food supply that the activities of the station will suffer no curtailment, but will be somewhat expanded. In the class of field investigations, some will be continued, some abandoned and some new studies undertaken.

Not as a complete catalogue of investigations provided for, but as illustrating the topics regarded as proper for the bureau's attention at this time, the following may be selected: The relation of fishes to mosquito extermination and to public health; the habits and propagation of salmon in Pacific waters; the natural history, propagation and protection of the blue crab; problems of the oyster industry; experiments in curing fishes; the properties of the roe of certain fishes alleged to be toxic or distasteful; various other investigations relating to the utilization of fishery products; dragon-flies and damsel-flies in relation to the culture of fishes in ponds; aquatic plants in relation to the culture of fishes in ponds; parasites affecting fish culture in ponds, life-histories, and means of control; systematic relations, habits and migrations of salmonoid fishes in the Great Lakes; biological and physical conditions of fish life in enclosed waters; the protection of wood against marine borers; the utilization of marine algæ, and the relation of kelp harvesting to the fisheries.

H. M. Smith,
Commissioner of Fisheries

Washington, D. C.,
June 18, 1917

SCIENTIFIC EVENTS

CONCERNING THE MANUFACTURE OF PHTHALIC ACID AND PHTHALIC ANHYDRIDE

The Department of Agriculture announces that the color investigation laboratory of the Bureau of Chemistry, of this department, has perfected, on a laboratory scale, a new process for the manufacture of phthalic acid and phthalic anhydride. This process, as carried out in the laboratories, appears so promising that it is thought that some manufacturers of chemicals and dyestuffs in this country may be able to supply their demands for these compounds by this process, provided the process can be reproduced upon a technical scale so as to obtain results commensurate with the laboratory investigations.

With a view to helping the chemical industry of this country, the Department of Agriculture hereby announces that it is ready to assist manufacturers who wish to produce these compounds. The expenses of the technical installation and of the labor and materials necessary will of necessity be borne by the firm, individual, or corporation wishing to manufac-

ture the products. The chemists of the color investigation laboratory will assist with expert advice, etc. The department reserves the right to publish all the data obtained from the technical experiments.

Since it seems very desirable that phthalic acid and phthalic anhydride be made available in large quantity in this country at the earliest possible moment, this offer of assistance will not be held open by the department for an indefinite period. D. F. HOUSTON,

Secretary

U. S. DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C.,
June 16

THE CROCKER LAND EXPEDITION

DR. HARRISON J. HUNT, surgeon of the Crocker Land Expedition, arrived in New York on June 20, on the Danish steamer *United States* and reported the story of his journey by sledge over the young ice of Melville Bay. He said that the other members of the Crocker Land Expedition were in excellent health when he left them, but that, owing to their supplies being very low, it is imperative that relief be sent to them at once. The Committee-in-Charge had sent Captain Robert A. Bartlett to take command of the sealer *Neptune,* the third relief vessel which has been chartered in behalf of the Crocker Land Expedition.

Doctor Hunt left North Star Bay on December 18, 1916. He was accompanied by another member of the party, W. Elmer Ekblaw.

"The steamship *Danmark,*" said Doctor Hunt, "which had been sent by the Committee-in-Charge, was at North Star Bay when I began my journey south. Mr. Donald B. MacMillan, leader of the expedition, Professor Edmund Otis Hovey and Jonathan Small—another member of the party—were at Etah. Their supplies will last until about the 1st of August and the members will then be dependent upon what walrus and caribou meat they could obtain at Etah. They might also get eider-duck eggs. They have very little coffee, sugar and canned fruits and flour was being rationed out. They may get some supplies from the *Danmark* by sledging a hundred and fifty miles to her. That vessel is in about six feet of ice and possibly she will be freed about the 1st of August. She has stores but is short of coal. I was glad to hear, on my arrival here, that the Committee has already arranged to send the *Neptune,* such help as is urgently needed. Another year in the Arctic would prove a great hardship to the members of the Expedition and might result in fatality."

Dr. Hunt and Mr. Ekblaw left North Star Bay with six sledges and were accompanied by five Eskimos. There was deep snow and the weather was generally bad. When they got out on the ice of Melville Bay they found that the winter had been comparatively open and that the ice, which was three inches in thickness and very porous, was continuously bending beneath them. The long sledge journey of fourteen hundred miles, which took from December 18, 1916, until April 16, of this year, was attended by many perils. Knud Rasmussen, the Danish explorer, who went part of the way with the scientists, as well as old Eskimos, said that the conditions for sledging were the worst they had ever seen. The later part of the journey was undertaken by Dr. Hunt accompanied only by Eskimos, as Mr. Ekblaw remained at South Upernavik.

Dr. Hunt said that from the scientific point of view the Crocker Land Expedition, which was sent out under the joint auspices of the American Museum of Natural History, the American Geographical Society and the University of Illinois, was obtaining excellent results.

Mr. Donald B. MacMillan—the leader of the expedition, has gathered an enormous amount of valuable scientific data. Dr. Hovey, who is probably the best equipped geologist who has ever gone into the Arctic, is in excellent health and spirits and is doing splendid work. He has set up the seismograph at Etah and has arranged to make extensive observations of all kinds.

Captain George B. Comer, the veteran ice-pilot, who was sent north on the first relief expedition, is a man of considerable scientific attainments. When this hale mariner is not engaged in his call-