

of the Hydrographic Office, was ordered by the Imperial Navy to sail on the submarine and to help in the management of the expedition. Dr. Matuyama spoke highly of the assistance rendered by Captain Akiyosi, especially in determining the positions and velocities of the submarine.

During the trip 27 measurements of gravity were made during twenty-five submergences of the submarine. In two cases, 2 measurements were made as checks during a single submergence.

At the time of writing his paper for the *Proceedings*, the photographic records and other data connected with the gravity surveys were being carefully studied and it is expected that the final results will be published later. Approximate values of gravity have been calculated and the results are shown on a map accompanying Dr. Matuyama's article together with the free air gravity anomalies. It is hoped that these gravity stations may be reduced by the isostatic method in order to throw some light on the isostatic condition of the crust under the Nippon Deep and surrounding areas.

W. B.

STREAM SURVEYS OF THE NATIONAL FORESTS AND PARKS

During 1934 the Bureau of Fisheries sent sixteen field parties to the different national forests and national parks for the purpose of studying and reporting on the physical, chemical and biological conditions of the streams and lakes lying within the forest or park areas. With this accumulated information as a basis, the aim was to improve the fishing in these areas by adopting a policy of planting the species, size and number of fish for which each surveyed stream or lake is best adapted.

However, the forests and parks were not the only ones to benefit from such a survey. The Bureau of Fisheries has accumulated a great deal of information which may be valuable in the future. The information can hardly be called new, but it is a more concise and quantitative statement of what is rather generally known.

In the East the four parties surveyed, completely or in part, the Great Smoky Mountain National Park in Tennessee and North Carolina and the following national forests: Green Mountain and White Mountain in New England, George Washington and Monongahela in Virginia and West Virginia and Pisgah and Nantahala in the two Carolinas and Georgia.

In the West the twelve parties surveyed, completely or in part, Glacier National Park and the following national forests: Sierra, Shasta, Klamath, Monoluyo, Coconino, Santa Fe, Humbolt, Roosevelt, Wasatch, Tonto, Crook, Coronado, Teton and Wyoming.

Comprehensive reports were compiled from the in-

dividual report blanks. These enlarged reports give a description of the methods of survey; a brief account of the physiography of the region; a list of the fishes found in the region; a statement of the natural enemies of fish present; a discussion of the kinds and relative abundance of aquatic fish food; notes on the water fluctuations of the streams and lakes and comments on the accessibility of the waters and the fishing intensity. Included with each of the reports are tables giving the following information about the streams: length, average width, average depth, average volume, gradient, character of stream bed, vegetation, pool grade, food grade, abundance of shade, game fish present, degree fished, fish recommended for stocking, size, section to be stocked, length of section, number of fish per mile, frequency and remarks. For lakes a table is included which gives the following: area, elevation, maximum and average depth, bottom food, plankton, vegetation, character of bottom, whether lake is natural or artificial, extent of shoals, degree fished, fish recommended, size, number, frequency and remarks. These tables are designed to furnish the Forest and Park Services with the major characteristics of each lake and stream and to give stocking suggestions for these waters.

THE JOHNS HOPKINS UNIVERSITY RESEARCH CONFERENCES ON CHEMICAL PROBLEMS

THE chemistry department of the Johns Hopkins University is holding its fifth Research Conference this summer at Gibson Island near Baltimore. The conference will be under the general direction of E. Emmet Reid and will run three weeks from June 24 to July 12. The plan is flexible, varying from day to day according to the nature of the topic under discussion and the wishes of those participating. The day begins with a more or less formal lecture outlining some field of research and directing attention to its unsolved problems. This is followed by a discussion in which each one present takes part, making what contribution he can to the solution of the problems presented. The ideal is to have a group large enough that all points of view may be represented, yet small enough that all who wish may take active part. The plan is to have recognized leaders in each field of research give the lectures and start the discussions, but its success depends on having a number in the group who are capable of contributing ideas. The remainder of the day is left to sports or conversations. These conferences are intended to combine mental stimulation, pleasant personal contacts and healthful recreation. The Gibson Island Club generously shares its facilities for this period. The club has an excellent golf course, fine tennis courts, splendid swimming and beaches, with ample dressing rooms