better, within the next decade. Practical engineers realize that every dollar of Federal and State funds appropriated for these surveys, if spent in the next twenty years, will save many dollars that otherwise must be spent by corporations and individuals in fragmentary surveys made for special purposes, and the worst feature of such an uneconomic procedure would be that it would provide no maps for the use of the general public.

THE TONGASS NATIONAL FOREST

One million cords of pulpwood on the Tongass National Forest, Alaska, has been sold by the Forest Service of the United States Department of Agriculture to the Alaskan-American Paper Corporation. The timber is from the east shore of the Behm Canal, Revillagigedo Island, about 32 miles from Ketchikan, the largest city in the Territory. The contract price of the timber was 60 cents per 100 cubic feet for spruce and cedar, and 30 cents per 100 cubic feet for all other species. The sale area covers 45,000 acres, and extends for 55 miles along the coast. Twenty per cent. of the forest is spruce, 66 per cent. hemlock, and 14 per cent. Alaska and western red cedar.

A conditional award has been made by the Forest Service to the company, pending approval by the Federal Power Commission of their application for a hydro-electric power license. The timber sale contract covers an initial period of 32 years, or until 1953. The price of the stumpage will be redetermined and fixed by the Federal Government in 1928, and every five years thereafter. Cutting must begin by October 1, 1923, thus allowing two years for organization and construction of improvements. The contract also requires the establishment of a pulp mill of not less than 25 tons capacity by October 1, 1926. A yearly cut of from 2,500,000 to 3,000,000 cubic feet is contemplated.

The award of this sale is in line with the general policy of the Forest Service for making available the timber resources of Alaska as a means of increasing the supply of pulpwood for the United States. The national forests of the Territory probably contain 100,000,000 cords of timber suitable for the manufacture of newsprint and other grades of paper. Under scientific management, experts say these forests can be made to produce 2,000,000 cords of pulpwood annually for all time, or enough to manufacture one third of the pulp products now consumed in this country.

The Alaska forests also contain the second chief essential of the pulp and paper manufacturing industry, namely, water power. No accurate survey of the power resources has yet been made, but known projects have a possible development of over 100,000 horsepower, and it is believed that a complete exploration of the national forests in southern Alaska will show not less than 250,000 potential horsepower that can be developed from water.

Forest Service cruisers are now working in Alaska collecting data for further use and development of the forests. One block of timber containing 335,000,000 cubic feet—enough to keep a 100-ton pulp mill running—has been advertised and is now ready for sale.

THE ROOSEVELT WILD LIFE MEMORIAL

The wild life memorial established by New York State to Theodore Roosevelt, The Roosevelt Wild Life Forest Experiment Station at Syracuse, is this summer conducting field investigations in New York State in the newly established seven thousand acre Allegheny State Park, which lies south of Buffalo on the Allegheny River. Here Mr. Aretas A. Saunders is investigating the birds, and Professor T. L. Hankinson the fishes. Through friends of the station funds have been provided to investigate the beaver in the Adirondacks, where numerous complaints of the injuries have necessitated a study of their present status. This investigation is being made by Dr. Charles E. Johnson. Through the cooperation of President Howard H. Hays, of the Yellowstone Park Camps Company, and with the approval and cooperation of Director Mather, of the Park Service, and of Superintendent Albright, of the Yellowstone National Park, a field party has been at work in the Yellowstone studying wild life problems, with headquarters at Camp Roosevelt, in the north-

eastern corner of the park. Dr. Robert A. Muttkowski has been making an investigation of the fish food producing capacity of the trout streams, and Dr. Gilbert M. Smith the relation of the aquatic plants to this fish food supply. Mr. Edward R. Warren, assisted by Mr. Ellis L. Spackman, is making an intensive study of the beaver, including the mapping of their dams and ponds. Another friend of the station has made it possible for Mr. Edmund Heller, formerly naturalist on the Roosevelt African Expedition, to conduct for the station an investigation of the status of the large game mammals of the park.

SCIENTIFIC NOTES AND NEWS

AT the opening session of the New York meeting of the American Chemical Society, which will be held at Columbia University, New York City, on September 8, Dr. Edgar F. Smith, provost emeritus of the University of Pennsylvania, will preside, and addresses will be made by Mr. Herbert C. Hoover, secretary of the Department of Commerce, and Sir William Pope, president of the British Society of Chemical Industry.

THE French Association for the Advancement of Science met during the first week in August at Rouen under the presidency of M. Rateau.

DR. HENRY GORDON GALE, professor of physics in the University of Chicago, and dean of the colleges of science, has been made chairman of the division of Physical Science of the National Research Council, Washington, D. C.

DR. HENRY H. DONALDSON, professor of neurology at the Wistar Institute, has been elected a foreign corresponding member of Il Reale Istituto Lombardo di Scienze e Lettere di Milano.

PROFESSOR HEINRICH O. HOFFMAN, of the Massachusetts Institute of Technology, has been elected an honorary member of the American Institute of Mining and Metallurgy.

DR. WALTER NERNST, professor of chemistry, has been elected rector of the Berlin University.

MR. J. SHEPPARD, of the Municipal Museums at Hull, has been elected president of the British Museums Association.

DR. W. J. HUMPHREYS, of the Weather Bureau, has been elected secretary of the American Geophysical Union, to succeed Dr. H. O. Wood, resigned.

E. G. MONTGOMERY, professor of agronomy in Cornell University, has been named by Secretary Hoover as chief of the food-stuffs division of the Bureau of Foreign Commerce.

MR. ROBERT C. DUNCAN, physicist of the Bureau of Standards, has accepted a position with the Bureau of Ordnance of the Navy Department.

PROFESSOR PAUL ANDERSON, dean of the School of Mechanical and Electrical Engineering at the University of Kentucky, has been appointed director of the research laboratory of the Heat Engineering Society at Pittsburgh.

EDWARD F. MCCARTHY, of the New York State College of Forestry at Syracuse, has been assigned to the new forest experiment station of the U. S. Forest Service at Asheville, N. C.

PROFESSOR G. F. WARREN, of Cornell University, has been requested by Mr. Wallace, Secretary of Agriculture, to serve as consulting specialist to the chief of the Bureau of Markets and Crop Estimates during the reorganization and consolidation of the bureau. Professor Warren has accepted and has been granted leave of absence from Cornell until February 1, 1922.

DONALD D. SMYTH, instructor in economic geology at Cornell University, has accepted a position as geologist with the Cerro de Pasco Copper Corporation of Peru.

FOREIGN zoologists who attended the recent summer meeting of the American Phytopathological Society included Dr. E. J. Butler, director of the Imperial Bureau of Mycology, Kew Gardens, Surrey, England, and Dr. Kingo Miyabe, of the College of Agriculture, Hakkaido Imperial University, Sapporo, Japan.

DR. P. H. AASER, director of the Norwegian