

exhibited a portable pack-transport 'wireless' telegraphy apparatus for military field purposes, available for communications across country up to 50 miles, or 150 miles over sea. Perhaps one of the most important exhibits, from both a scientific and a practical point of view, was Dr. P. E. Shaw's electrical measuring instrument. This machine gets rid of several objections to those ordinarily in use. From the director of the Imperial Institute came a large and varied exhibit which may be taken as a substantial evidence of the useful practical as well as scientific work which is being done under Professor Wyndham Dunstan's direction. The exhibit included a variety of new and rare minerals from Ceylon and several minerals from Canada, as also specimens of cyanogenetic plants, illustrating an investigation which has been conducted by Professor Dunstan and Dr. T. A. Henry, to throw light on the origin of the prussic acid which is produced by certain plants.

As usual, from the Marine Biological Association came quite an interesting exhibit, consisting of a small collection of living fishes from the shore and from shallow water, to illustrate the differences in habit and mode of life adopted by different species. Mr. J. Stanley Gardiner showed some of the many valuable results obtained by his recent very successful expedition for the investigation of the Indian Ocean. These consisted of photographs illustrative of the vegetation of the Seychelles Islands, and some rocks dredged off Providence Coral Reef, 844 fathoms. From the director of Kew Gardens came an attractive exhibit in the shape of some specimens showing the precocious flowering of plants, and some exalbuminous grass seeds. The exhibit by Mr. J. E. S. Moore and Mr. C. E. Walker, showing recent researches in cell-division, was evidence of the good work which continues to be done at Liverpool University. Two of the most notable, attractive and suggestive exhibits were Mr. K. A. Tarrant's photographs of electric discharges and Dr. Albert A. Gray's spectroscopic photographs of the membranous labyrinth of the ear in different animals. There were many other exhibits of solid scientific interest, but

we have only space to refer to the varied specimens of work from the National Physical Laboratory, including a great variety of photomicrographs, an apparatus for the test of the strength of materials at very high temperatures, the Picou permeameter designed for testing the magnetic permeability of rods or strips and a bifilar galvanometer, free from zero creep. Sir William Crookes exhibited ultra-violet spectra of the metals photographed with a quartz train of five double prisms and some remarkable stereoscopic photographs taken in South Africa. The demonstrations in the meeting-room by means of the electric lantern proved, as usual, to be the great attraction of the evening. Mr. G. W. Lamplugh showed some very striking photographic slides of the Batoka Gorge of the Zambesi River, while the slides and miniature demonstrations by Professor Silvanus Thompson of the electric production of nitrates from the atmosphere were remarkably brilliant and striking. They were intended to illustrate a process for obtaining from the air products of great value for agriculture and in the dye-stuff industry.

THE MIKKELSEN EXPEDITION TO THE BEAUFORT SEA.¹

We have received from Mr. Mikkelsen a detailed statement of his plans for the expedition to the Beaufort sea, to which frequent reference has already been made in the *Journal*, and on which he proposes to sail from Victoria about the middle of May. The vessel which he has acquired for that purpose has been renamed the *Duchess of Bedford*, in honor of a prominent supporter of the expedition. She is a sailing craft of 66 tons, with a length of 67½ feet, 18 feet 9 inches beam, and 7½ feet depth of hold, and is built of camphor wood, the outside planking being of heart quakewood, which again is sheathed with gumwood above and below the water-line, and with iron plating at the bows. The ship was built as a sealer, and is specially strengthened by bulkheads, etc., to withstand ice-pressure. As already mentioned, Messrs. Leffingwell, Stefansson, and Ditlevsen will proceed down the

¹ From the *Geographical Journal*.

Mackenzie, while Mr. Mikkelsen will take the ship through Bering Strait, visiting the coast of Siberia for the purpose of collecting dogs and one or two ponies; then pushing his way along the northwest coast of Alaska, and, if possible, avoiding the pack-ice by keeping inside the shoals, which the slight draught of the ship (8 feet) should enable him to do. Beyond Point Barrow special attention will be paid, so far as time permits, to tidal observations, which are here of particular interest by reason of the sudden change of twelve hours in the tide constant which seems to take place between Harrison Bay and Herschel Island. It is hoped that the whole expedition of ten men will be united at the mouth of the Mackenzie by about August 20. Proceeding eastward past Cape Bathurst, it will cross over to Prince of Wales Strait, and endeavor to establish a depot of provisions abreast of Princess Royal Island. Retracing its course, it will establish winter quarters on Minto Inlet, where as much scientific work as possible will be carried on, while some of the men will procure fresh meat by hunting. In the spring of 1907, two men, lightly equipped and making use of the depot already formed, will endeavor to cross to Melville Island, and thence to Prince Patrick Island, afterwards making a trip of some 60 miles over the ice, and, if possible, obtaining an idea of the configuration of the sea-bottom by means of soundings. Meanwhile the scientific workers will have been extending their knowledge by means of trips from the ship, which, as soon as the ice opens sufficiently, will cross over to Nelson's Head, and endeavor to follow the coast of Banks Island to Burnet Bay, where she will unship the provisions and remain either until the autumn of 1907, or, if supplies permit, until the summer of 1908, being then sent home. In the spring of 1908, a party of three men, with the dogs and pony, will start west-northwest over the ice, with provisions for a hundred and forty days, keeping this course as nearly as possible, until soundings show that the edge of the continental shelf is passed, or land is found, or the position of 150° W., 76° 30' N., is reached. If the first-named eventuality is realized, an en-

deavor will be made to reach the edge of the shelf on a southward course, and to determine its trend as far as possible, the party making for the nearest coast when provisions run short. If land should be met with, it will be examined as far as possible; but if neither this nor the edge of the shelf should be found, the explorers will push on as near as possible to the position mentioned, whence they will either endeavor to reach Wrangel Island, or make for the nearest coast, as circumstances may decide. In case the ship remains a second winter, as much scientific work as possible will be carried on at Burnet Bay, but in any case the observers left here will take the ship home independently of the other party.

MOSQUITO EXTERMINATION.

THE following is the full text of the law enacted at the last session of the New Jersey State legislature and recently signed by the governor:

CHAPTER 134.

AN ACT to provide for locating and abolishing mosquito-breeding salt-marsh areas within the state, for assistance in dealing with certain inland breeding places, and appropriating money to carry its provisions into effect.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

1. It shall be the duty of the director of the state experiment station, by himself or through an executive officer to be appointed by him to carry out the provisions of this act, to survey or cause to be surveyed all the salt-marsh areas within the state, in such order as he may deem desirable, and to such extent as he may deem necessary, and he shall prepare or cause to be prepared a map of each section so surveyed, and shall indicate thereon all the mosquito-breeding places found on every such area, together with a memorandum of the method to be adopted in dealing with such mosquito-breeding places, and the probable cost of abolishing the same.

2. It shall be the further duty of said director, in the manner above described, to survey, at the request of the board of health of any city, town, township, borough or village within the state, to such extent as may be necessary, any fresh-water swamp or other territory suspected of breeding malarial or other mosquitoes, within the jurisdiction of such board, and he shall prepare a map