

**JAPANESE METEOROLOGICAL SERVICE¹ IN
KOREA AND CHINA.**

A GLANCE at a map of the orient will clearly show how serious and difficult a matter it is to predict weather in Japan. Japan stands under the direct influences of the Pacific Ocean and the Asiatic continent, and also of the tropical and polar ocean currents, so that meteorological as well as climatic conditions in Japan are, indeed, very complex. Very often a continental cyclone and a typhoon, which of course comes from the tropics, pass through Japan simultaneously, thus bringing complexities to the weather. On account of this, the Japanese government has felt the necessity of establishing new meteorological stations along the coasts of Korea and China.

Nine stations have been established at first, in Korea and Manchuria, and their approximate geographical coordinates are as follows:

Localities.	Latitude, N.	Longitude, E.	Height, Meters.
1. Fusan,	35° 6'	129° 3'	23
2. Mokpo,	34 41	126 4	8
3. Chemulpo,	37 29	126 37	70
4. Wonson,	39 9	127 26	3
5. Yongampo,	39 56	124 22	5
6. Tairen,	38 55	121 34	5
7. Yinkow,	40 40	122 14	3
8. Mukden,	41 48	123 23	57
9. Josin,	40 40	129 20	4

Three new stations at Port Arthur, Niko-loisk and Alexandrosk have been added to the above, and there are four others which are at the same time marine semaphore stations.

The Chemulpo Meteorological Observatory is of the first order, and the other stations are mostly of the second order and subordinate to the former. These stations make six observations daily, at 2, 6, 10 A.M., and 2, 6, 10 P.M. on one hundred and thirty-fifth meridian time (east of Greenwich). Each station is provided with a Fortin barometer, an August psychrometer, a maximum thermometer, a minimum thermometer, a Robinson anemom-

eter with electric device, a vane, a pluviometer of two decimeters (eight inches) diameter, an atmometer of the same diameter, a Jordan heliograph or sunshine recorder, a Richard barograph, a Richard thermograph and a Richard hygrograph. The central Chemulpo Observatory possesses, in addition, an anemograph, an anemo-cinemograph, a pluviograph, a micro-seismograph, earth thermometers for different depths and a sufficient number of accessories and apparatus, such as marine chronometers, a theodolite, a sextant, photographic apparatus, etc.

The Chemulpo Meteorological Observatory and the whole meteorological service in Korea are under the direct supervision of Professor Y. Wada as the chief of the service. Ever since 1879 Professor Doctor Wada has been connected with the meteorological service in Japan, and has been for many years the chief of the service of predictions in the Central Meteorological Observatory. Japan owes a great deal to him for his important investigation of meteorological conditions in Japan and for the organization and completion of our weather service. At the beginning of the recent Russo-Japanese war Professor Wada was entrusted by the Japanese government with completing the work as the chief of that service. The Chemulpo Meteorological Observatory receives every day telegraphic reports of three meteorological observations at 6 A.M., 2 P.M. and 10 P.M. from the principal stations in Japan and from those in Korea and Manchuria, with the addition of telegrams twice a day from Tientsin, Chefoo, Zikawei, Nankin, Hangchow, Hankow, Shan-shi, Amoy and Manila. Thus it will be seen that the reports abundantly suffice to enable this observatory to give weather predictions and storm warnings to semaphore stations.

The building for the observatory, constructed temporarily and opened since the beginning of the year 1905, is situated on a little hill quite near the Japanese concession at Chemulpo, at the mouth of Kanko River. Besides the observatories above mentioned, a large magneto-meteorological observatory is now planned to be established in Pekin by the

¹ For the Meteorological Service in Japan, see a short account of 'Recent Advances in Meteorology and Meteorological Service in Japan,' published in *The Popular Science Monthly*, February, 1906.

government of Japan, and also several stations in the southern part of the Chinese empire.

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SCIENTIFIC NOTES AND NEWS.

PROFESSOR A. A. MICHELSON, of the University of Chicago, and Professor F. Kohlrausch, of Berlin, have been elected honorary fellows of the Physical Society of London.

REAR ADMIRAL COLBY M. CHESTER, superintendent of the U. S. Naval Observatory, was placed on the retired list on February 28. He will be retained in temporary active duty in the Bureau of Navigation. Rear Admiral Chester will be succeeded in charge of the Naval Observatory by Rear Admiral Asa Walker.

THE fiftieth anniversary of the connection of Professor Frederic Ward Putnam with Harvard University has been celebrated by the presentation of a volume, handsomely bound, containing autograph greetings from forty of his former students, who are now actively engaged in scientific work, most of them in the field of anthropology. Dr. H. C. Bumpus, director of the American Museum of Natural History, has been authorized by President Jesup to offer Professor Putnam ethnological material sufficient to illustrate fully the life of the inhabitants of the Philippine Islands, leaving him to make such disposition of the collection as he may think best.

A COMMITTEE has been formed in Great Britain to celebrate the fiftieth anniversary of the discovery, by Dr. W. H. Perkin, of mauve dye, the first of the coal tar products.

WE learn from *Nature* that Sir Alexander B. W. Kennedy, F.R.S., has been elected a member of the Athenæum Club under the provisions of the rule which empowers the annual election by the committee of three persons 'of distinguished eminence in science, literature, the arts, or for public services.'

PROFESSOR J. C. ARTHUR and Mr. F. D. Kern, of Purdue University, held research scholarships at the New York Botanical Garden for the month of January. Their atten-

tion was devoted to the collection of plant rusts in the cryptogamic herbarium.

A. J. COX, A.B., A.M. (Stanford), Ph.D. (Breslau), has resigned an instructorship in chemistry at Stanford University to accept the position of physical chemist in the government laboratories at Manila.

DR. J. W. BEEDE, of Indiana University, who has studied the upper Carboniferous and Permian formations from Nebraska to Texas, has been engaged to take charge of the detailed mapping of the Permian formations of Kansas next summer for the University Geological Survey of Kansas.

AMONG German men of science who have signified their intention of attending the Boston meeting of the American Medical Association are Professor Trendelenburg, Leipzig; Professor von Rosthorn, Heidelberg; Professor Dührssen, Berlin, and Professor von Frey, Würzburg.

DR. NICHOLAS SENN has been selected to deliver the oration on surgery at the International Medical Congress, Lisbon.

THE Middleton-Goldsmith lecture of the New York Pathological Society was delivered, on February 23, by Dr. Ludwig Hektoen, of the University of Chicago and the Memorial Institute for Infectious Diseases, the subject being 'Phagocytosis.'

M. L. FULLER, of the United States Geological Survey, will give a course of lectures in April at the University of Chicago on the hydrologic work of the government.

DR. GEORGE GRANT MACCURDY, of Yale University, gave a lecture on 'Prehistoric Scandinavia' before the Ethnological Society of America at the American Museum of Natural History on February 28.

The Journal of the American Medical Association states that Judge McEwen, of the Superior Court, has rendered a decision against the Chicago Medical Society in its efforts to maintain in Grant Park a boulder placed there in memory of Dr. Charles Guthrie and his pioneer work on chloroform.

ON June 29, 1903, a meeting was held at the Mansion-house, under the presidency of