into the terms of the metric countries to which they are shipped.

One may imagine the time and labor lost in these processes and the tendency to prevent expansion of our commerce that these vexations must exert, for where other things are equal the four hundred and fifty millions of metric potential customers naturally incline to deal with those who speak the same trade language as themselves. The views of exporters and importers recently presented through the *Herald* show how keenly they feel this handicap and how eager they are for the adoption of the simple, uniform and widely used system which would clear the existing obstructions from the pathway of commerce.

If we had no commercial relations whatever with foreign countries it would seem incongruous that the American people, while progressing in all other directions, should have failed to adopt such a unified and simple system as the metric for the facilitation of internal trade—and this is nearly twenty times as large as that done with other countries. The first step toward adopting the metric system was taken forty years ago, when Congress passed the law legalizing it in contracts and court pleadings. Six years after that step was taken Germany adopted the metric system —and it has contributed not a little to the industrial and commercial growth at which the world marvels—while we are still weighing copper by one 'standard,' silver by another and drugs by a third, with other confusions 'too numerous to mention' in measures of volume and length.

We have been outstripped in the adoption of the metric system by Japan and by countries that the average American condescendingly regards as half civilized. The metric is taught in our schools, but the children must also learn the complicated systems that are retained in use; although a full year's time would be saved in their education if these were dropped. In electrical operations, in engineering, in pharmacy, in industries that demand nice measurements, like the manufacture of automobiles, and watchmaking, and in numerous other fields the metric system is in common use to-day. Why longer continue the confusion and the loss of time and labor and accuracy involved in retaining the obsolete weights and measures? Congress should awaken to the fact that this is the twentieth century and comply with the demand for adoption of the metric system.

CURRENT NOTES ON METEOROLOGY.

METEOROLOGY AT THE EIGHTH INTERNATIONAL GEOGRAPHIC CONGRESS.

The Eighth International Geographic Congress was held in the United States in September, 1904, and the *Report* has just been published, 'by courtesy of the United States Congress at the Government Printing Office.' The number of papers devoted to meteorological and climatological subjects was not large, but the matters treated in these papers were of some general interest. Dr. Cleveland Abbe, Jr., in his 'Meteorological Summary for Agaña, Island of Guam, for 1902,' presents a discussion, along approved lines, of the data collected during one year at Guam, and while the period is very short, the tropical conditions of the island make a long series of observations much less necessary than is the case in a higher latitude. Professor A. J. Henry, of the Weather Bureau, in an account of 'A Climatological Dictionary of the United States,' calls attention to the summary of the climatological work that has been done in this country which is now in preparation by the Weather Bureau. The first chapter of the new volume, which is really a census of the climatology of the United States, will treat of the broader features of climate, and the remaining chapters will deal with the climates of the several states and territories. The records of about 600 stations will be used. The 'Scientific Work of Mount Weather Meteorological Research Observatory' is considered by Professor F. H. Bigelow, who states that the Weather Bureau is 'looking to the future needs of a rapidly developing and intensely interesting branch of science' and is 'trying to build the very best observatory possible.' Frequent mention of the Mount Weather Observatory has been made in these

notes. The disregard of the cyclonic element in climatological summaries is believed by R. DeC. Ward to be a distinct disadvantage, in his 'Suggestions concerning a more Rational Treatment of Climatology.' Annual, monthly and daily summaries, being concerned with final and definite periods, do not bring out the variations of the climatic elements under cyclonic control, and yet the irregular cyclonic changes are the very ones which most closely affect man. In a rather striking way, a paper by Dr. H. R. Mill, 'On the Unsymmetrical Distribution of Rainfall about the Path of a Barometric Depression crossing the British Isles,' emphasizes the value of a discussion of one element of climate—in this case rainfall—on the basis of the cyclonic, not the diurnal or weekly, unit. Dr. Mill's study of the distribution of rainfalls in relation to the individual cyclones which produce these rains is a distinct advance on the usual summaries of the conventional kind. Papers on climate are contributed as follows: Canada, by R. F. Stupart, director of the Canadian Meteorological Service; Kimberley, by J. R. Sutton, meteorologist of the De Beers Mines; Natal, by F. W. D'Evelyn; Pamplemousses, Mauritius, by T. F. Claxton, director of the Royal Alfred Observatory, Mauritius; Ts' Aidam, Tibet, by A. Kaminski; Western Australia, by W. Ernest Cooke, government astronomer of Western Australia. Two papers on meteorological exploration are contributed, one (abstract) by A. Lawrence Rotch, 'A Project for the Exploration of the Atmosphere over the Tropical Oceans,' a plan which Mr. Rotch was able to carry into effect during the past summer; and one by H. Arctowski, on 'Antarctic Meteorology and International Cooperation in Polar Work.' Mr. Wm. Marriott, assistant secretary of the Royal Meteorological Society, contributes a paper on 'Rainfall with Altitude in England and Wales,' in which the data for 1881–1890 are dealt with. The increase of rainfall with altitude; the greater rainfall in the west than in the east, and the greater range of the monthly rainfall in the west are the more important points brought out.

REPORT OF THE CHIEF OF THE WEATHER BUREAU.

THE annual report of the chief of the Weather Bureau (for the year ending June 30, 1904) has recently been published. The forecasts of hurricanes, gales, snow, cold waves, etc., were successful, and their economic value was generally recognized. The River and Flood Service is to be extended. Long-range forecasts, issued by various persons for a month or so in advance, continue to give Weather Bureau officials much trouble, and the matter is given some attention in the present volume. The conclusions reached by the bureau (p. xvii) are the logical ones, but we are inclined to believe that it is a mistake for our Weather Bureau to pay too much attention to these 'fake' forecasts. Advertising is what some persons most desire, and we should suppose that the 'weather prophet' might increase the number of subscribers to his publications as a result of the notoriety gained in this way. It is encouraging to note the cooperation of several universities and colleges with the Weather Bureau. Some of these institutions have given the government land for the erection of meteorological stations, and others (Brown and the University of Wisconsin) have provided, without cost, office quarters for recently established stations. A considerable series of investigations to be carried on at Mount Weather is enumerated.

HEALTH, DISEASE, DEATHS AND THE WEATHER.

FROM the earliest times, the relations between weather conditions and health have attracted attention. In recent years, with the discovery of the micro-organisms which cause many diseases, our notions regarding the effects of weather and climate have undergone considerable change. Nevertheless, there are many direct and indirect relations between meteorological conditions and the prevalence of, and deaths from, certain diseases which can not fail to impress any one who studies vital statistics. For the United States some interesting material along these lines may be found in the 'Vital Statistics' section of the Statistical Atlas of the Twelfth Census, recently issued. Charts and diagrams show the

death rates from various diseases in selected areas, in cities and in rural districts. The proportion of deaths at all ages (1900) was highest in March; the deaths of children under five were at a maximum in August. For diseases of the respiratory system, the deaths are at a maximum in the colder months, as is usually the case, for obvious reasons. The same is true for diseases of the circulatory system and for diphtheria. On the other hand, for diarrheal diseases, typhoid fever and malarial fever, the maxima come in the warmer months.

R. DEC. WARD.

HARVARD UNIVERSITY.

THE AMERICAN PHYSIOLOGICAL SOCIETY.

AT the meeting of this society held in Ann Arbor, Michigan, December 28 and 29, the following officers were elected:

President—Professor William H. Howell, Baltimore, Md.

Secretary—Professor Lafayette B. Mendel, New Haven, Conn.

Treasurer—Professor Walter B. Cannon, Boston, Mass.

Additional Members of the Council—Professor A. B. Macallum, Toronto, Canada; Dr. S. J. Meltzer, New York City.

The following new members of the society were elected: Dr. C. L. Alsberg, instructor in biological chemistry, Harvard Medical School, Boston, Mass.; Dr. E. G. Martin, associate professor of physiology, Purdue University, Lafayette, Indiana; Dr. John Auer, fellow of the Rockefeller Institute, New York City; Dr. C. W. Edmunds, lecturer on materia medica and therapeutics, University of Michigan, Ann Arbor, Michigan; Dr. W. B. Pillsbury, director of the psychological laboratory, University of Michigan, Ann Arbor; Dr. S. A. Matthews, associate in pharmacology, University of Chicago; Dr. Swale Vincent, professor of physiology, University of Manitoba, Winnipeg, Canada; Dr. Shinkishi Hatai, assistant in neurology, University of Chicago; Dr. V. E. Henderson, demonstrator of physiology and pharmacology, University of Toronto; Dr. William Salant, assistant in physiological chemistry, Columbia University and fellow of the Rockefeller Institute, New York City; Dr. O. P. Terry, assistant in physiology, St. Louis University; Dr. C. C. Guthrie, instructor in physiology, University of Chicago; Dr. R. S. Lillie, instructor in physiology, Harvard Medical School, Boston; Dr. J. H. Kastle, chief of Division of Chemistry, U. S. Public Health and Marine Hospital Service.

The scientific proceedings of the society's meetings will be published in the February number of *The American Journal of Physiology*. It is probable that the next annual meeting of the society will be held in New York City during convocation week, 1906–7.

THE CONGRESS OF THE UNITED STATES.

THE following bills have been introduced in the house of representatives:

December 13, 1905.

Introduced by Mr. Needham, a bill (H. R. 7017) providing for the transfer of certain national parks from the Department of the Interior to the Department of Agriculture. Referred to the committee on public lands.

By Mr. Lacey, a bill (H. R. 7019) for the protection of animals, birds and fish in the Forest Reserves. Referred to the committee on agriculture.

By Mr. Stevens, of Minnesota, a bill (H. R. 7108) to authorize the establishment of fish culture and biology stations in the United States. Referred to the committee on merchant marine and fisheries.

December 18, 1905.

A bill introduced by Senator Teller (S. 2193) for a public building for the United States Geological Survey at Washington, D. C. Referred to the committee on public buildings and grounds.

By unanimous consent upon motion of Senator Cullom, a bill passed in the senate on December 19, to appropriate the sum of $25,000 to establish a Fish Cultural Station in the State of Illinois.

SCIENTIFIC NOTES AND NEWS.

THE American Association for the Advancement of Science having decided to hold its next regular meeting in New York City in convocation week, beginning December 27,