tions of the healthy body as distinguished from the diseased. True, incidentally to the teaching of disease, the normal is mentioned in purely medical courses—but that is all. Again, epidemiology, dealing with the causes of disease outside the body, with those remoter causes which must be studied and appreciated in every detail to attain the prevention of disease, is all but ignored in medical curricula, for the medical interest lies in the cause *after,* not before, it enters the body; and then only when it gives therein appreciable symptoms. Again, vital statistics are almost wholly untouched in medical curricula, again because the interest is in disease, not in health; in the disease of the already sick individual, seeking relief, not in his social, economic, or other public health relationships to disease. Almost the only interest of public health closely allied with the medical curriculum is that of diagnosis; and even here the high emphasis of the medical course lies in diagnosis for treatment, not in diagnosis as part of sociology. In physics, geology, chemistry, in bacteriology, parasitology, in every one of the subjects of a full public health course, not only is each subject given time almost as great, sometimes greater than the whole time given in the ordinary medical public health course to the public health applications of all these subjects put together, but again, the material and the emphasis given for professional public health purposes differ from the material and the emphasis given in the same subjects when taught as a brief part of the medical course proper.

Academically then public health has a place in education peculiarly its own, with an individual curriculum composed of special certain phases of all other sciences and many arts; administratively, its staff and its students constitute a separate unit, requiring certain of these sciences as taught by other faculties but also having certain subjects of its own not dealt with by the others; and serving other faculties with these. Practically, public health prepares its special students for a special field of services which is in continually growing demand—a profession as distinct in its services to mankind as are the professions of theology, agriculture, medicine, law, engineering, dentistry, mining or any other. That public health should continue to be merely a 45 hour course in a medical curriculum, as it is to-day in many universities, is as unreasonable to-day as it would be to place mathematics as a department of engineering or of physics; to make law a division of ethics; or to make chemistry a detail of agriculture. Such classifications might be made—might even be ably defended—but classifications to be of highest value must correspond with the greatest number of relationships, and it is a broad useful form of classification which makes public health, on academic, administrative and practical grounds, an independent faculty, manned and equipped for its peculiar researches, teachings and applications to the progress of the whole race.

Summary: *Public health is the science and art of conscious physical adjustment between man and his surroundings in the universe.* The modern conception of man as a product of and a part of nature brings the subject of man's individual physical adjustments with his immediate surroundings into its proper place as *the* fundamental study—*the* basis of every form of education. Hence, public health is not only eligible for a position as an independent faculty in any university but is as definitely entitled to such a place as any of those now recognized. It is futile to consider the ordinary 45 hour course in public health, furnished as an incident in the ordinary 4000 to 5000 hour medical course, as more than a smattering, offered to medical students alone, of the 900 to 4500 hour courses in public health offered to professional public health students.

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## SCIENTIFIC EVENTS

### THE EQUADOR-COLOMBIA EARTHQUAKE

THE following letter to the Secretary of State, Washington, has been forwarded by the Department of State to the Smithsonian Institution:

Referring to my telegram No. 30, of December 20, 12 noon (1923), I have the honor to report more fully concerning the earthquakes which have occurred during December in this Republic.

The seat of the first and most severe shocks was along the Equadorean-Colombian frontier, the damage in this country being principally confined to a relatively small area in the Department of Narino situated near the town of Ipiales and Tulcan. The first earthquake was felt on December 13, and was followed almost daily up to December 20 by other severe earth tremors. As a result the villages of Cumbal, Carlosama, Aldana and Chiles appear to have been totally destroyed and considerable damage done in the towns of Tuquerres and Ipiales. Nevertheless, it is a most inexplicable circumstance that even to-day no exact data concerning the loss of life and property is available in Bogota. Neither the government nor the Colombian Red Cross is in possession of reliable statistics. As nearly as I can ascertain, however, the more conservative estimates place the dead at two, or possibly three hundred, and the homeless in the neighborhood of 20,000 persons. The property loss, from a monetary standpoint, is probably very small as the inhabitants of the district are of humble mode of existence. Aid, though slow in reaching the stricken area, in part due to bad means of communication, at length reached the population, who are said to have been suffering greatly from cold on account of the high altitude. As a

gauge of the extent of the catastrophe, the appropriation of the National Government of $15,000 for relief is enlightening as well as the subscriptions of various organizations and private individuals, none of which was large.

Since the initial damage in Narino, other portions of Colombia have been visited by the earth disturbance. About five in the morning of December 22, a severe shock was registered throughout central Colombia, including Bogota. No appreciable damage was done in the capital, but Gachala, Gacheta and Ubala, towns some forty miles northeast of Bogota, are reported largely demolished and much damage done in Medina. Strange to say, only seven persons were killed. Communication with this area was impeded by the obliteration of the Medina road and the destruction of telegraph lines. Slighter shocks followed up to the twenty-sixth of the month completing the damage. It is probable that the suffering is slight in this locality as the climate is warm.

Immediately upon learning of the full extent of the difficulty in Narino, I addressed a note of sympathy to the government. The American colony in Bogota followed generously with a subscription for the sufferers which was turned over to the Colombian Red Cross. To this testimony of friendship was added the message of condolence contained in the department's telegraphic instruction No. 35 of December 24, 4 p. m., which was immediately made known to the Ministry for Foreign Affairs. The generous offer of tentative assistance, proffered by the American Red Cross to the Colombian Red Cross, came as a happy final demonstration of the interest felt in the United States for the afflicted here.

SAMUEL H. PILES

## AGRICULTURE IN THE TROPICS

THE Governor of Trinidad, Sir Samuel Wilson, laid the foundation-stone of the buildings and laboratories of the Imperial College of Tropical Agriculture at St. Augustine on January 14.

The London *Times* writes:

It is five years since Lord Milner, as Colonial Secretary, appointed a committee to consider the establishment of such an institution. After two years of careful inquiry the committee submitted its recommendations, and a scheme was drawn up to provide for the foundation of the college, which was opened in 1922. The first intention was to limit the scope of its activities to the West Indies themselves, and its actual title was "The West Indian Agricultural College." Gradually, however, its real value to the tropical dependencies of the Empire was realized, and last year it was decided to place it on a broad imperial basis.

Already there is evidence of the desire upon the part of the college authorities to lay their resources at the disposal of the Empire, and in the first number of *Tropical Agriculture*, the official journal of the college, there are instructive notes upon agricultural development not only in the West Indies, but in Ceylon, Sierra Leone, Gambia, Tanganyika and the Sudan. Four post-graduate students have already been sent to the college by the Empire Cotton Growing Corporation for special research work in genetics and plant breeding. Eighteen students are now taking the three-year course necessary to gain the diploma of the college.

Arrangements are in progress for the early erection of a complete sugar factory designed for teaching and experimental purposes. The machinery for this has been presented by the leading manufacturers of sugar machinery in the United Kingdom. The factory will be of a size sufficient to manufacture sugar on a small commercial scale and will, to a large extent, be operated by the students.

The appointments of the college are controlled by a governing body, on which Cambridge University is represented by Sir Arthur Shipley; the Secretary of State for the Colonies by Sir David Prain and Mr. E. R. Darnley; Glasgow University by Professor F. C. Bower; the Royal Botanic Gardens, Kew, by Captain A. W. Hill; and the Imperial College of Science and Technology by Professor J. B. Farmer. The principal is Sir Francis Watts, K.C.M.G., D.Sc.

Incorporated with the college is the Imperial Department of Agriculture. In this department special attention will be paid to research under the guidance of a staff which includes professors of zoology and entomology, mycology and bacteriology, botany, chemistry, agronomy and economics, and a sugar technologist.

## DATA FOR THE INTERNATIONAL CRITICAL TABLES

THE editorial board of International Critical Tables will appreciate receiving from scientific investigators any numerical data which they are able and willing to furnish, which have not been published prior to January 1, 1924. All data are desired which characterize the behavior of any definite material, substance or system. For the purpose of this request, such data will be divided into two classes, as follows: Class I: data which constitute the only information of the kind available; Class II: data which, in the opinion of the investigator, substantiate, extend or improve upon existing information of the same kind.

In connection with data belonging to both classes, the following information should be given: (a) an exact definition of the material, substance or system to which the data apply; (b) the investigator's estimate of the accuracy of the values; (c) the name of the investigator or investigators responsible for the measurements; (d) the laboratory in which the investigations were carried out; (e) a brief statement of the experimental method used; (f) an exact statement of the units in which the data are expressed; and (g) any other supplementary information necessary for the complete characterization of the data.

For the data belonging to class II, such additional