being derived from this work. We venture to say, however, that very few persons indeed have had any idea of the extent or the value of the deductions which were being drawn from the vast body of material thus collected. No one who looks over this volume of 230 quarto pages can fail to be struck with the thoroughness, the exactness and the eminently scientific quality of the whole work. It is obviously impossible to attempt to discuss the publication in these notes. It is our desire simply to call attention to it and to recommend a careful study of it to all meteorologists. Blue Hill Observatory has certainly given us a piece of work which will be a lasting credit to American science.

SOME CLIMATIC FEATURES OF THE ARID REGIONS.

A PAPER on 'Some Climatic Features of the Arid Regions,' prepared by the Chief of the Weather Bureau for the National Irrigation Congress, whose fifth session was held at Phœnix, December 15–17, 1896, is published by the Weather Bureau. It deals with the general climatic characteristics of the southwestern portion of our country, and lays especial emphasis on the amount of wind movement, with a view to determining to what extent the wind may be used as a motive power in driving the mills to be used for irrigation purposes. Sensible temperatures, which have come into prominence recently, and are now regularly noted on our daily weather maps, come in for some share of attention, and two charts illustrate the average actual and sensible temperatures for summer, and the mean actual and sensible temperatures for July, 8 p. m. These charts show very clearly that it is in the regions of the West and Southwest, where the relative humidity is low, that there is the greatest difference between the sensible, or wet bulb, temperature and that of the dry bulb, while in the East, especially in the Northeast, where the relative humidity is much higher, the temperatures as shown by the wet and dry bulb readings are most nearly the same. It appears that there is an abundance of effective wind on the plains east of the Rocky Mountains in all months of the year, and no special adaptation of the ordinary windmill is necessary. The amount of effective wind decreases with approach to the Rocky Mountains.

CLIMATIC ZONES ON THE ISLAND OF SAKHALIN.

AN interesting fact regarding the relation of the floral zones and meteorological conditions on the island of Sakhalin is noted in *Ciel et Terre* (Jan. 1, 1897). This island, lying off-shore from the eastern coast of Siberia, is surrounded by cold currents and is further exposed to the cold northwest winds from the mainland. At sea-level snow falls in May and lasts till the end of that month, and the coast is very cold. The climate becomes milder with increasing distance from the sea and with increasing altitude, the cold air accumulating on the lowlands near sea-level. In consequence of this distribution of temperature the lowlands have an Arctic flora, while the highlands and the intermediate heights have a temperature and, in some cases, a sub-tropical flora. This is a curious reversal from the ordinary condition of things, which gives more and more boreal vegetation with increasing altitude.

R. DE C. WARD.
HARVARD UNIVERSITY.

CURRENT NOTES ON ANTHROPOLOGY.

STATURE AND WEIGHT.

THESE anthropological elements are discussed in a highly satisfactory manner by Dr. Buschan, of Stettin, editor of the *Centralblatt für Anthropologie*, in the 'Real-Encyclopädie der Gesammten Heilkunde,' now publishing in Berlin.

The shortest tribes are the African pygmies, who stand about 1.30 meters. In America no tribe is mentioned with an average under 1.60. The tallest are undoubtedly American, some (doubtful) Caribs of the Orinoco at 1.84, and the Tehuelche, of Patagonia, at 1.78.

The article on the weight gives abundant information about the relative weight of the brain and other organs.

Both articles contain a very complete bibliography of the recent scientific literature of the subjects.

THE NATIONAL MUSEUM OF COSTA RICA.

Largely owing to the energy of the Director Señor Anastasio Alfaro, the large archæological and ethnographic collection brought together by the government of Costa Rica has now been commodiously installed in a building erected for the purpose at San José de Costa Rica. A photograph of it is reproduced in *La Revista Nueva* for October last.

Few localities on our continent offer better specimens of aboriginal pottery and stone work that are discovered within the area of Costa Rica, as was abundantly illustrated at the Columbian Exposition at Madrid. A beautiful example of a decorated jar is given in the journal of the date mentioned, and also the outlines of a number of others.

In spite of the careful studies of Manuel de Peralta on the ancient tribes of Costa Rica, we still remain ignorant of the language and affinities of the tribe which seems to have left the most abundant remains—the Guetares.

D. G. Brinton.

University of Pennsylvania.

NOTES ON INORGANIC CHEMISTRY.

In the last *Berichte* F. Giesel describes an interesting instance of what are probably solid solutions. A little more than a year ago Goldstein showed that the halid salts of the alkali metals take on a more or less intensive color under the influence of kathode rays. Giesel obtains the same result by heating the salts in closed glass tubes at a very low red heat in sodium or potassium vapor. Bromid and iodid of potassium are colored a beautiful blue, chlorid of potassium or sylvine a dark heliotrope, chlorid of sodium or rock salt yellow or brown. The color is not superficial, as clear crystals of potassium bromid a centimeter cube are uniformly colored. The coloration seems to be due to the solution of the metallic sodium or potassium in the solid salt. It is thought probable by Giesel that the blue coloration of rock salt is due to dissolved sodium. Attempts to color in a similar way clear crystals of fluorspar were not successful.

In continuing his investigations into the occurrence of gold in nature, Professor Liversidge finds the metal in all natural saline deposits. Rock salt and other natural salts contain from one to two grains of gold per ton, while bittern waters and kelps furnished in some cases from fourteen to twenty grains.

Professor Liversidge has also examined the structure of gold nuggets from many different sources, by polishing and etching sections. He finds that all nuggets possess a well-marked crystalline structure and usually contain foreign substances. He suggests that the gold has been slowly deposited from aqueous solution and that the nuggets are more or less rolled masses of gold which have been set free from disintegrated veins.

J. L. H.

SCIENTIFIC NOTES AND NEWS.

RESEARCH AND THE UNIVERSITY.

An editorial note in the February number of the *American Naturalist* has been quoted with approval in several journals. We also reproduce this note, partly in order to give it such