

fortunately thrown overboard with some rubbish from the ship laboratory.

The exact measurements of the specimen will be given later when the photograph is reproduced by the Fish Commission.

THEO. GILL,
C. H. TOWNSEND.

CURRENT NOTES ON METEOROLOGY.

HAIL PREVENTION BY CANNONADING.

THE hail prevention cannonading craze has gone very far in Windisch-Feistritz (Steiermark), the home of this newest undertaking for artificially controlling weather phenomena. In *Das Wetter* for October Dr. Friedrich Stengel, who has recently visited the locality, gives an enthusiastic account of the somewhat remarkable arrangements which have been made for this work. The huts containing the firing apparatus are 1 km. apart, in four long parallel rows, the rows also being 1 km. apart. There are three groups of stations, containing twelve, thirteen and fifteen stations each, respectively. Each section has a central station, under the charge of a *schliessmeister*, and each *schliessmeister* is directed by the general superintendent. Cannonading begins when a thunder-storm is within two or three kilometers. Sometimes only one of the sections fires; at other times all the stations participate. Firing continues until the sky begins to clear overhead, or, if this does not happen, until thunder and lightning cease and a general rain sets in. The central station of each section regulates the time of the beginning and ending of the firing, as well as the rapidity of the discharges.

THE DUST STORM OF MARCH, 1901, AND GLACIAL STUDIES.

IN the October number of the *Meteorologische Zeitschrift*, Richter calls attention to the use that may be made of the fall of red dust which occurred over most of Europe on March 11 last. It was suggested some time ago that studies of glacial movements and phenomena might be facilitated by coloring a considerable portion of the surface of a glacier, and then noting the rapidity of movement, and the folding and fracturing of this particular colored stratum. The dust storm of last March colored the Euro-

pean glaciers on a grand scale, and thus an excellent opportunity of making critical studies of these glaciers has been provided, which could never have been brought about by artificial means.

THE CLIMATIC CONTROL OF GOVERNMENT IN THE TROPICS.

MR. W. ALLEYNE IRELAND, who is well known in this country through his writings on the settlement and government of tropical possessions, read a paper on the influence of geographical environment on political evolution before the British Association at its Glasgow meeting. In this paper the possibilities of native government within the tropics are discussed. The conclusion is reached that while the natives of the tropics are not deficient in intellectual power, their 'climatic discipline' renders them unfitted to play the part of legislators or responsible administrators, or to maintain a government sufficiently stable to admit of proper commercial development.

UNDERGROUND TEMPERATURES AT OXFORD.

THE volume containing the meteorological observations made at the Radcliffe Observatory, Oxford, from 1892 to 1899, presents some notable facts regarding soil temperatures. The observations were made with platinum resistance thermometers, placed at various depths. The thermometers on the whole were found to work much more satisfactorily than the common spirit thermometers with long stems. It appears that the annual variation in temperature is reduced to 0.1° at a depth of 45.3 ft., and to 0.01° at 66 ft. The semi-annual wave has these same limits at 21.4 and at 36 ft., respectively.

R. DEC. WARD.

BOTANICAL NOTES.

IMPORTANT PHILIPPINE WOODS.

UNDER this title Captain George P. Ahern, of the Ninth Regiment of United States Infantry, has issued a small quarto volume of 112 pages, illustrated with forty-two colored plates. The author, who is in charge of the Forestry Bureau at Manila, candidly states that it is a compilation undertaken in response to numer-