

INTELLIGENCE FROM AMERICAN SCIENTIFIC STATIONS.

GOVERNMENT ORGANIZATIONS.

Geological survey.

Division of chemistry. — During February, Prof. F. W. Clarke and Dr. T. H. Chatard completed analyses of waters from Utah Hot Springs, Lake Tahoe, and from Alum Creek in the Yellowstone National Park. They have also analyzed some rocks and sediments collected in the Great Basin. — Dr. Chatard has begun investigations into a new method of silicate analyses, the results of which promise to be of importance. — Professor Clarke has analyzed halotrichite and alunogen from a large deposit at the head waters of the Gila, in New Mexico; saussurite from California; allanite from Topsham, Me.; a mineral near cimolite from Norway, Me.; a handsome chlorite from Georgetown, D.C.; and an exceedingly interesting variety of pectolite, simulating jade, from Alaska.

Professor Clarke has also completed the analyses of two more mineral-waters from Montana, collected by Dr. A. C. Peale last summer. One of them is a calcic thermal water from a spring in Emigrant Gulch, on the west side of the Yellowstone valley, opposite Bottler's ranch. This water contains .2350 of a gram of solid matter to the litre. The temperature of the water at the spring is 38°.8 C., and the flow of water is large. The other water is also from the Yellowstone valley, the spring being situated on the upper waters of Mill Creek, about ten miles due east from Riverside, one of the stations on the Park branch of the Northern Pacific railroad. Professor Clarke finds this to be a good mineral-water. It contains 3.8125 grams of solid matter to the litre, mainly sodium, magnesium, and calcium carbonates, with considerable sodium sulphate, and small proportions of chlorides. The water also contains iodine; but the quantity brought to the laboratory was too small to estimate its amount. This water is very agreeable to the taste. It resembles very much the 'Apollinaris' water from the valley of the Ahr in

Prussia; and from this resemblance the springs have been named the 'Mill Creek Apollinaris springs.' The water is cold, having a temperature of 4°.5 C.

Mr. F. A. Gooch, formerly of the Northern transcontinental survey, has been appointed assistant chemist, to begin work in the laboratory at Washington April 1. — Messrs. Barus and Hallock at the laboratory at New Haven, needing some capillary wire tubes, and being unable to find any, have succeeded in making them at the laboratory.

Crater Lake, Oregon. — Among the interesting places visited by Mr. J. S. Diller, in his reconnaissance of the Cascade Range last summer, was Crater Lake, about two or three miles west of Mount Scott. This is a body of water some three miles in diameter, lying in a depression some two thousand feet below the general level surrounding it. The sides are in general perpendicular, and the water is of a most beautiful tint. Toward the western end of the lake there is a small conical island, the rock of which resembles basalt, although Mr. Diller has not yet made a careful examination of it. The rocks forming the walls of the lake are andesitic. The general elevation of the country immediately about the lake is between two thousand and three thousand feet lower than the summit of Mount Scott. Capt. Dutton is convinced, from Mr. Diller's description of the lake, that it is homologous with the craters studied by him in the Hawaiian Islands. To the latter Capt. Dutton gives the name of 'caldeiros.' He says the first view of them does away with the idea that they are ordinary craters. They are huge caldrons or boiling lakes of molten rock.

Miscellaneous. — Capt. Dutton has received letters from Honolulu, by the steamer leaving there March 3, which state, that, for the few days preceding that date, the 'red sunsets' have been exceedingly brilliant. — During February, Mr. Vanhise, one of Mr. R. D. Irving's assistants, prepared about fifty new thin rock-sections, among which were a large number of greenstones.

RECENT PROCEEDINGS OF SCIENTIFIC SOCIETIES.

American society of civil engineers.

April 2. — The subject for discussion was the reduction of grades necessary to be made upon railway-curves to compensate for the increased resistance to the traction of the locomotive when traversing curves, in comparison with resistances encountered upon straight lines. The various forces composing such resistances have been combined in a formula deduced mathematically; but careful experiments which have been made tend to show that no formula has yet been found which is of general application. The rules adopted upon various great railway-lines were stated; but it was plain that additional information must be

obtained before positive rules of general application could be given.

Chemical society, Washington.

March 27. — Papers were read as follows: F. W. Clarke, A new variety of pectolite from Alaska. — Dr. J. H. Kidder, The use of the Nessler reagent in air analyses. In several cases the air-washings which were under examination gave a distinct, clear, green coloration in place of the characteristic yellowish-brown precipitate produced by ammonia. This color was also found in a few experiments upon rain and snow waters, but never in dealing with drinking-waters. Dr. Kidder is inclined to ascribe the new