A special bibliography is given for each important volcanic district, followed by a brief summary of events, with frequent historical review. From an abundance of material the following may be noted: Falcon island in the Friendly (Tonga) islands (20° 20′ S. lat.; 175° 20′ W. long). was first noted as a shoal in 1867. In 1877 smoke was seen ascending from the sea surface over the shoal. In October, 1885, an island had been formed 3,700 meters long and 75 meters high. At this time a terrific eruption was in progress, enormous clouds of constantly changing form rising over the island; earthquakes were felt on the neighboring islands and thundering sounds were heard on the southernmost island of the Fiji group, 325 kilometers away. In 1886 the island was estimated as 2,600 meters long and 50 meters high; in 1887 the height was 90 meters. In 1889 the length and breath were 2,040 and 1,630 meters; the height was 47 meters. The adjacent sea bottom was 1,800 meters deep. The island consisted of ashes and has subsequently been greatly reduced by wave action. In 1892 its height was only eight meters, and its disappearance may be soon expected.

LIMESTONE RANGE OF THE KLONTHAL, SWITZERLAND.

DR. CARL BURCKHARDT, a pupil of Heim's, contributes the 35th number of the Beiträge zur Geologischen Karte der Schweiz (Monographie der Kreideketten zwischen Klönthal, Sihl und Linth; Bern, 1896, 205 p., maps and plates). It concerns a small district in which the structural features of successive eastward portions are, as it were, out of joint with each other; this being explained as the effect of a folding and shearing on north-south lines, oblique to another folding on roughly east-west lines. Most of the report is given to stratigraphy; the later pages treat *Oberflächengeologie*, but less thoroughly than could be wished. A more detailed analysis of drainage lines might serve to determine the relative date of the two systems of folding, which is left in doubt. A characteristic feature of the work is a number diagrammatic views, drawn from nature by the author in a style closely resembling that of his master.

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CURRENT NOTES ON ANTHROPOLOGY.

NOTES ON AMERICAN CERAMICS.

THE device of the potter's wheel was unknown in either North or South America. A substitute for it is described as still in use among the Araucanians of Chili. It is a convex dish which is moved backward and forward on a smooth stone. Revolving in it, the clay is moulded to a symmetrically circular form. (*Globus*, Feb. 20.)

A cylindrical mug, with a handle, quite like a German 'Bierseidel,' was manufactured by the ancient Araucanians, as the same authority tells us; and it is singular how exactly this form recurs in the pottery of the Cliff-dwellers. Numerous examples are in the Museum of the University of Pennsylvania.

Intentional glazing was probably nowhere developed into a branch of ceramic art on this continent; but partially glazed specimens, of ancient date, are not unusual in Central American collections. Examples are in the Museum just mentioned. They seem to be accidental, owing to an abundance of siliceous matter in the clay.

THE RACIAL GEOGRAPHY OF EUROPE.

THE series of articles on this subject by Professor W. Z. Ripley, in the *Popular Science Monthly*, deserves the attention of all readers interested in questions of modern anthropology. The Europeans of to-day offer a peculiarly complicated problem, owing to the extensive crossings to which all

the types have been subjected. Professor Ripley undertakes its solution by an analysis of each of the ethnic elements, such as language, skull-form, complexion, hair, stature, etc. Numerous maps, diagrams, and photogravures put the reader at a glance in possession of the relative localization of these traits. The theories of their origin and distribution, as advanced by the principal students of the subject, are brought forward and examined. The author evidences both a thorough acquaintance with the subject and a freedom from bias in reaching his conclusions which cannot fail to command for them the most careful attention.

ANOTHER INTERPRETER OF THE MAYAN HIEROGLYPHS.

It is a gloomy duty to chronicle the victims to the story of the Mayan hieroglyphs, but a duty it is.

One of the latest is Herr A. Eichhorn, of Berlin. He has discovered that about 24,000 years ago the ancestors of the Mayas dwelt on an island in a now dried-up lake in Central Asia. They there developed a science of astronomy, mathematics and philosophy, which they embalmed in their heraldric insignia, their hieroglyphs and in the grammatic and etymologic construction of their languages. On reaching Central America, say about 12,000 B. C., they continued their relations with Europe until 1500 B. C., the Pelasgi and Leleges being really Mayas. About the ninth century of our era the Northmen visited Yucatan, and brought from there the Gothic style of architecture into Europe. Mayas, Nahuas and Toltecs are, in fact, the same people and speak the same secret language, as Mr. Eichhorn proves by an analysis of many words. Their common calendar system he explains with ease. It is entirely theosophic and symbolic.

Does the reader wish more? Then let him buy Mr. Eichhorn's work, a handsome quarto of 128 pages, entitled 'Naual, oder die hohe Wissenschaft der architectonischen und kunstlerischen Composition bei den Maya-Völkern.' (Berlin, Max Spielmeyer.)

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NOTES ON INORGANIC CHEMISTRY.

A study of ozone from a technical standpoint by E. Andreoli appears in the *Journal of the Society of Chemical Industry*. Theoretically, one should be able to produce a kilo of ozone per electric horse-power, but in practice only ten or twelve grams are obtained. By improvements in the apparatus for producing ozone, the author increases the production to thirty and even fifty grams per horse-power, making the cost of ozone about three shillings a kilo. Among the improvements in the apparatus are passing the air directly between the electrodes, thus avoiding two glass dielectrics; a minimum distance between the electrodes, made possible by discarding the glass dielectrics; increase in surface (and number) of electrodes; use of electrodes covered with numerous sharp points. The author proposes a large number of technical applications of ozone, such as purification of drinking water, cleansing of beer casks, preparation of wood for instruments and furniture, bleaching of starch and dextrin, oxidation of drying oils, purification of wine and brandy, etc. It does not appear, however, that any of these proposed uses have been tested practically and on a large scale.

An investigation, by S. A. Andrée, of the amount of carbon dioxid in the atmosphere, abstracted in the *Chemisches Central-Blatt*, shows but slightly varying quantities at different elevations. Air collected on a balloon ascent from the height of 1,000 to 3,000 meters contained 3.23 parts carbon dioxid per 10,000; from 3,000 to 4,300