

of it, forming a large swamp; further on it obstructs a valley on the south, forming Lake Merrill, and finally Kalama river falls over the end of the flow. Many large springs emerge from beneath the lava flows.

MAARE OF THE EIFEL.

HALBFASS presents the results of soundings and temperature observations in the eight Eifel maare (Petermann's Mitt., XLIII., 1897, 149-153; with more detail in Verh. Naturh. Vereins, Bonn, 1897). A ninth maar (Wanzenboden) is only two or three m. deep, and in part thickly occupied with reeds; the Hinkelsmaar and many other basins are now converted into dry meadows. Those which still hold water deepen from margin to center; at first gradually, then more rapidly with slopes of 20-30°, and again gently near the center. Only the Laacher See is large enough to have a well defined flat central floor. The Pulver maar is the deepest (74 m.) of all German lakes outside of the Alps. The shore lines approach a circular outline, but the Meerfelder maar is like a half moon, occupying only half of its circular basin. Much statistical statement of fact with arithmetical comparison of the different maare is given. The life-history of the lakes is not directly considered.

THE EASTERN ARCTIC SEA.

SUPAN gives a review of Nansen's polar expedition, from which the following notes on the eastern Arctic sea (the northern part of the 'eastern hemisphere') are taken (Petermann's Mitt., VII., 1897, 158-163). Sheets of ice occupy much of the surface, continually drifted by currents and winds; now torn apart and opening water channels, now pressed together and forming walls and ridges. The latter reach heights of nine m., and offer the greatest obstacles to sled travelling. The remnants of former ridges drift about in berg-like masses with steep walls. The drift ice here is contrasted

with the much thicker pack ice west of Greenland. The winter snow began melting in June, and the firm drift ice was not revealed till the end of summer. Its color is then a dirty brown, caused chiefly by mineral dust. Fresh water pools are formed on the ice surface, surprisingly rich in microscopic organisms. The ice increased in thickness slowly through the winter to June, varied until August, and decreased to early winter. Thickening in summer is ascribed to freezing underneath of fresh water supplied by melting snow above. In early spring the ice was coldest, from -16° to -30°C. In summer it approached the melting point, and then became plastic, so that crushing took place without sound; bending frequently replaced breaking.

The discovery of the great depth of the Arctic, 3000-3900 met., where traversed by the Fram, is regarded as the most important geographical result of the expedition. Polar lands are, therefore, not to be expected. A sample of serial temperature soundings gives a surface layer 200 m. deep at -1°C.; a second layer, 660 m. thick, with mean temperature of +0°.22 C., and about 3000 m. of deep water with mean temperature of -0°.57 C. The surface layer has least salt, and the intermediate layer most. The latter is supplied from the North Atlantic, dipping beneath the Arctic surface layer because its density is determined by salinity rather than by temperature.

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CURRENT NOTES ON ANTHROPOLOGY.

ARREST OF DEVELOPMENT IN HUMAN GROUPS.

On this subject Professor Schrader has a curious article in the *Revue Mensuelle* of the Paris School of Anthropology. His conclusion is that the failure to advance or the actual retrogression of peoples and societies is a question of lack of adaptation to environment. This is not new; indeed, it is

quite old. His novel proposition is that, given a better environment, the most inferior race may become superior to all others. "That which we are to-day, others may be to-morrow." He also claims that a race long resident in a given *Milieu* becomes best suited to it, and, granted equal facilities, is sure to surpass all other races there. He quotes the native population of Mexico in illustration. Conquered by Cortes, beaten into the dust by brutal European rule, it has seized the arms of its conquerors, and now is rising in its might above its ancient invaders. "Is it an illusion," he asks, "that reveals to us in the physiognomy of the Yankee the hard, bony face of the Red Skin?"

PRINCIPLES OF THE STUDY OF MYTHOLOGY.

In a recent number of the monthly journal *Nord und Sud*, Dr. Thomas Achelis has a suggestive article on the relations of mythology to ethnography. He advocates and illustrates the principle now constantly gaining ground among advanced anthropologists, that if we learn accurately the daily life of primitive peoples, understand the impressions they receive from their environment and the mental impulses they gain from language and the interchange of ideas, then psychology is prepared to explain their religious perceptions according to definite and fixed principles. Similarities or identities between remote tribes will no more call for the theory of unity of source than the mere similarity of the sound of words would justify the etymologist in adopting the same theory for its explanation.

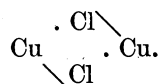
In all of his writings Dr. Achelis has pursued this same line of thought, and, although this has not recommended him to those of his reviewers who adhere to a more antiquated philosophy, there can be no question but his is the 'party of the future.'

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NOTES ON INORGANIC CHEMISTRY.

THE seventh article of the series by Alfred Werner in the *Zeitschrift für anorganische Chemie*, on the constitution of inorganic compounds, describes molecular weight determinations of a large number of salts in organic solvents, such as piperidin, pyridin, methyl sulfid, etc. In the case of many salts regarding which there has been considerable doubt, the results were in accord with the monomolecular formula, as AlCl_3 , FeCl_3 , FeCl_2 ; also CoCl_2 , CoBr_2 . Tin (stannous) and lead salts were also found to be monomolecular. Cuprous salts were in general normal (CuCl , CuI , etc.), but showed considerable tendency to polymerize by doubling. Cuprous cyanid appeared only in dimolecular form, $\text{Cu}_2(\text{CN})_2$. The silver halogen salts showed a strong tendency to polymerization, the iodid having a molecular weight corresponding to $(\text{AgI})_2$, while the chlorid (and bromid) were between $(\text{AgCl})_2$ and $(\text{AgCl})_3$. Silver nitrate, however, had the normal formula AgNO_3 . Professor Werner is of the opinion that in the polymerized molecule the metal atoms are not united together, but that the union is between metal and non-metal, as



It would seem possible, however, that the union might subsist through the medium of the non-metallic atoms, which would account for the greater tendency to polymerization on the part of the cyanids.

Boric acid has a quite extended use as a food preservative, but the data as to its effect on health are very meagre. R. A. Cripps, in the *Analyst* for July, recounts a series of experiments on the action of boric acid on the digestive ferments. His results are the following: With malt-extract in presence of 0.01% to 1% boric acid, starch was dissolved completely in 12 minutes, not