

ing party, for it proved too heavy for the climb in the new soft snow below the Chang La, and he had been compelled to turn back from the rear of the party only a few minutes before the train of porters was carried away by the avalanche.

Captain Noel in his letters mentions many difficulties in photography at extreme altitudes: the most curious is the effect of the dry Tibetan climate on the cinematograph film, which cracks and sparkles with electric sparks when pulled through the hand, so that it is necessary to work with a wet hand when threading the film on the developing frames. Happily this effect was anticipated, and the makers of the Newman-Sinclair camera succeeded in making the film run through the gate without friction, and provided open-mouthed film boxes, so that damage from electrical markings is reduced to a minimum.

The official photographs which have come home from the expedition up to the time of writing comprise about 200 quarter-plate negatives on glass, a certain number of large panorama films, and two small V.P.K. films. These are supplemented by good series of pictures taken by Dr. Longstaff and Captain Finch, which have been placed at the disposal of the committee. A selection of enlargements is shown in the Photograph Room of the society, but the record must be very incomplete until the arrival of Captain Noel in October with all the larger plates. Enlargements from these will be shown as soon as possible, and the Mount Everest Committee will probably arrange for a public exhibition of the pictures in the Alpine Club Hall after Christmas, as was done last January.

SCIENTIFIC EVENTS

NITRATES IN SOUTHEASTERN CALIFORNIA

NITROGEN is needed in large quantities for use in fertilizers, in explosives required in engineering and mining, and in munitions made for national defense in war. During the war the demand for nitrates became so urgent that every known source of them in the United States was ransacked to find enough to supply our ever-increasing needs. The world's store-

house for nitrates is Chile, but the growing menace of the submarine made it imperative to divert to other uses the shipping then engaged in the Chile nitrate trade.

Small quantities of nitrates are found in almost every region where the rainfall is very small. The most promising deposits in the United States were those in the Amargosa region, in southeastern California. Before the war some of these deposits had been examined several times, chiefly by private companies that sought to obtain capital for their exploitation, but the reports made were so conflicting that the United States Geological Survey, Department of the Interior, decided to make a careful study of all the deposits in that region.

The nitrate-bearing material, or "caliche," as it is called in California, resembles in character and mode of occurrence the well-known caliche found in Chile, but it is much poorer and thinner. It forms a layer a few inches thick that lies less than a foot below the surface, at the plane of contact between the unaltered bedrock, which there consists chiefly of beds of Tertiary clay shale and the overlying clay soil. A white powdery layer, composed chiefly of sulphate of sodium and calcium, nearly everywhere lies between the caliche and the clay soil. The caliche cuts across successive tilted beds of the underlying clay shale and is thus clearly independent of the geologic structure.

In the examination made by the Geological Survey maps and cross sections were made at many places. Scores of trenches and hundreds of pits were dug down to or into the bedrock, and the soil, caliche and bedrock were then systematically sampled. Many hundred qualitative tests and nearly a thousand quantitative analyses of the caliche were made. The commercial development of the deposits, though they are the most promising in the country, was found to be impracticable, but the results of the investigation should set at rest any uncertainties as to the nature or quantity of the nitrates in the areas examined and should serve as a guide in the exploration of other supposedly nitrate-bearing regions.

An account of this investigation is given in the Geological Survey's Bulletin 724, on "Nitrate Deposits in the Amargosa Region,

Southeastern California," by L. F. Noble, G. R. Mansfield and others.

THE DEDICATION OF THE STERLING LABORATORY OF YALE UNIVERSITY

THE dedication of the new Sterling Chemical Laboratory of Yale University will occur on April 4, 1923, during the spring meeting of the American Chemical Society at New Haven. This arrangement has just been completed by national officers of the society and officials of the Yale Corporation.

The scientific meeting will be under the auspices of the New Haven and Connecticut Valley sections of the society. Professor Treat B. Johnson, of Yale University, is chairman of the executive committee in charge, chosen from members of the two sections.

The dedication ceremony, with probably 1,500 or 2,000 members of the American Chemical Society in attendance, as well as the Yale faculty and student body, will be impressive. The new building is one of the finest in the world and is built on an entirely new architectural principle. The main building is constructed on three sides of a square, three stories high and is in harmony with other buildings on the campus. In this building are class and lecture rooms, private laboratories and offices.

Inclosed in the square is a one-story, saw-tooth roof type of factory building, with movable partitions. This structure can be varied to suit the various needs of the teaching staff. It is constructed to give the maximum of light and air and is equipped so that it can be converted into several small workshops or one large shop, equal in size to a small commercial chemical plant.

The following are chairmen of the several committees for the meeting: Program, T. B. Johnson; Finance, J. S. Gravely; Dedication, John Johnston; Registration, Blair Saxton; Arrangement, A. J. Hill; Hotels and Transportation, Ralph Langley; Smoker, P. T. Walden; Reception and Entertainment, C. H. Matthewson; Publicity, W. T. Read; Ladies' Entertainment, Mrs. John Johnson. The Chi chapter of Alpha Chi Sigma is to have charge of the information service of the meeting.

THE JOSEPH SULLIVANT MEDAL

MR. BENJAMIN GARVER LAMME, chief engineer of the Westinghouse Electric and Manufacturing Company, has been nominated to be the first recipient of the Joseph Sullivant Medal of the Ohio State University. In October, 1920, on the occasion of the celebration of the fiftieth anniversary of the founding of the university, Dr. T. C. Mendenhall, a trustee and emeritus professor of physics of the university, presented a sum of money, the income of which is to be used for a gold medal to be known as the Joseph Sullivant Medal of the Ohio State University.

The conditions of the gift provide that this medal shall serve as a memorial of the eminent services in behalf of the university of Mr. Joseph Sullivant who, as a member of the first board of trustees, was influential in determining the character and future of the university. The medal is to be awarded once in five years in recognition of an admittedly notable achievement on the part of a son or daughter of the university, whether that achievement be in the form of an important invention, discovery or contribution to science, the practical solution of a significant engineering, economic or agricultural problem; or the production of a valuable, literary, artistic, historical, philosophical or other work.

Persons eligible to receive the medal shall be, in the order of preference, as follows: graduates of the university; non-graduates who have studied at the university not less than two years; members of the faculty who are not graduates of the university, who have served as such for at least ten years, when the work offered as entitling them to the award has been done during their connection with the institution.

From the list of nominations made by the faculties of the different colleges of the university, the graduate council selected three, *viz.*, George Wesley Bellows, artist; Benjamin Garver Lamme, chief engineer, Westinghouse Electric and Manufacturing Company; Herbert Osborn, research professor in the department of zoology and entomology, the Ohio State University.

The names of these three candidates were