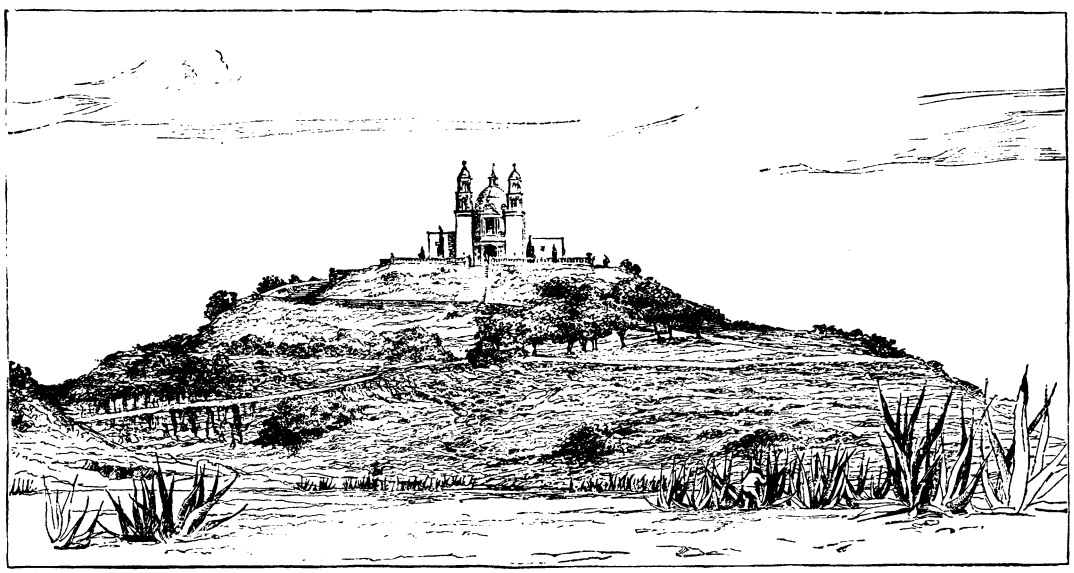
truncated, and with staircases, like the pyramid itself. As to the material of which the latter was constructed, Mr. Bandelier arrives at the conclusions of A. v. Humboldt and his successors; i.e., that it was built of large sun-dried adobes. Burnt lime for coating or for mortar, Mr. Bandelier discovers, was never employed by the Indians; pulverized limestone being prepared for the purpose. No shaft has as yet been sunk in order to ascertain whether the interior of the pyramid is of the same material as the exterior, or whether the structure was made around a natural mound, or whether it is hollow, and possibly contains some sepulchral vault of historic importance. According to tradition, the platform was crowned with a temple, in which Quetzalcohuatl, the god of air, was worshipped. The current opinions about this mysterious being are learnedly discussed.

From Cholula the traveller directs his steps southward, and visits the valleys of Oaxaca, the famous ruins of Monte Alban, Xagá, Mitla, and others. Vivid description is given of all of them, copious and careful measurements secured, and sketches as well as illustrations presented, of hitherto unobserved details.

Did Mr. Bandelier, as we presume, set forth on his exploring tour inspired by the hope of detecting in the architectural remains of Mexico proper such elements as would tend to prove these remains to represent some final stage of tectonic development, of which the initial stage must be sought in what he calls the 'tenement houses' of the sedentary Indians in New Mexico, he must have felt somewhat disappointed with the result of his investigation. We are of the positive opinion, that if in plan, as well as in execution, he had met in Mexico's architecture any traces pointing either to an intimate or only to a remote historic connection with the window-houses of the Indians of the north, he would have exulted over such discovery, and have expounded its adaptation to a certain theory that was advanced by the late Lewis H. Morgan, whom Mr. Bandelier looks up to as to a beloved teacher and friend. Not to have yielded to the temptations of a pre-occupied mind is a merit which deserves full and fair acknowledgment. It shows the faithfulness of Mr. Bandelier's observation and the conscientiousness which he brought to bear on the fulfilment of his scientific task.



THE GREAT MOUND AT CHOLULA.[1]

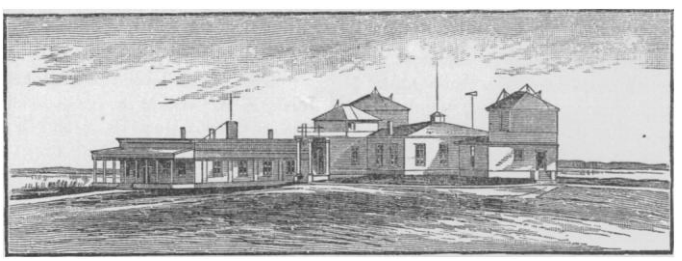
[1] Reproduced by permission of the Archaeological institute.

THE ARGENTINE ZONE CATALOGUE.

THE work for which Dr. Gould went to South America fourteen years ago, as astronomer to the Argentine Republic, is at last completed, and both the zone-lists and the star-catalogue compiled from them are published. It is not for us in a non-technical journal to discuss the purely astronomical value and accuracy of such a work, but rather, in announcing it, to recall to the contemporaries of this eminent astronomer, and bring to the attention of the younger men, — who have, even during the long progress of the work, attained an age at which they may appreciate it, — this monument of patient determination, executed under trials that might well be termed privation, exile, and affliction. During the disheartening delays in constructing the observatory and mounting the instruments, the 'Uranometria argentina,' a worthy

Zone catalogue. Mean positions for 1875.0 of the stars observed in the zones at the Argentine National observatory. By BENJAMIN APTHORP GOULD. Cordoba, 1884. 2 v. 4°.

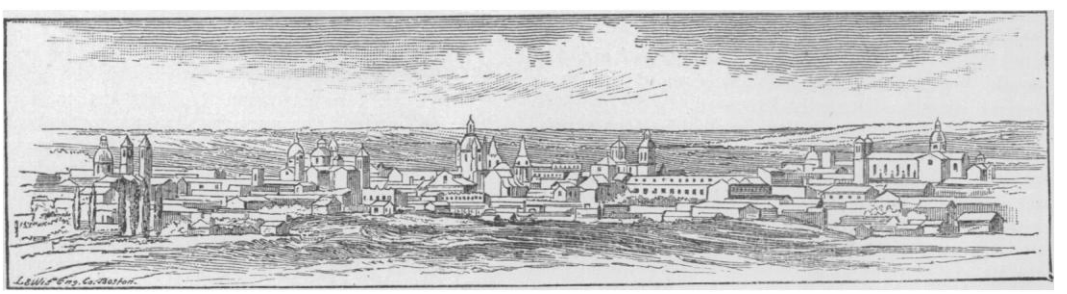
complement to Argelander's 'Uranometria nova' of the northern sky, was undertaken, and carried well toward completion, and published with star-charts in 1879, giving the estimated brightness of all southern stars, visible without telescopic aid, in about seventy grades of brilliancy. The observations for this work were made by the naked eye, or with ordinary binocular field-glasses, and entirely by the assistants; Dr. Gould's near-sightedness preventing his sharing immediately in the work, although he directed and overlooked its execution with the most minute carefulness. The zone observations, by which astronomers understand the determination of the position of stars observed in successive belts around the sky, every star being noted as it crosses the field of a meridian-circle telescope, were begun in August, 1872, and completed in 1875. In these, every one of the original telescopic observations was made by Dr. Gould; and they numbered over 105,000. Since 1875 the work of computation, revision, and publication, has occupied eight years, until now the finished catalogue is before us; and Dr. Gould may proudly feel his ambition satisfied in ending so well the work begun in outline by Lacaille with his little telescope at the Cape of Good Hope over one hundred years ago.



DR. GOULD'S OBSERVATORY AT CORDOBA.

Among the younger men who have shared in Dr. Gould's labors at Cordoba, only one has remained with him through the many years since its beginning. We feel sure from the frequent mention, in the annals of the observatory, of the faithful services of Mr. John M. Thome, that the director will gladly see the name of this assistant associated with his own in our brief notice of the work they have accomplished together.

The first of the accompanying cuts, reproduced from sketches by a former assistant, shows the observatory and the director's house on the *barranca*, from which the second view, of Cordoba in the valley of the Rio Primero, is taken. The overshadowing of the town by the churches is characteristic of the place.



VIEW OF CORDOBA FROM DR. GOULD'S OBSERVATORY.

NOTES AND NEWS.

In accordance with a recommendation of the recent geodetic conference, a series of observations for latitude is to be made at the U. S. naval observatory, which, taken in connection with a similar series made elsewhere, and compared with observations made after an interval of some years, will assist in determining whether there are any slow changes taking place in latitudes upon the earth. Lisbon, which is very near the same parallel as Washington, is expected to co-operate with the naval observatory. The observations will be made with the prime vertical instrument; and at Washington a line-officer of the navy will be detailed for the work, which will probably require several years.

— Prof. F. H. Snow of the University of Kansas reports that only two Decembers (in 1872 and 1876) in the past seventeen years were colder than that just passed. It was the cloudiest December upon record, and the precipitation of rain and snow was more than fifty per cent above the average. Ice formed upon the Kaw River to the thickness of thirteen inches.

— The fifteenth annual meeting of the Wisconsin academy of sciences, held at Madison from Dec. 29 to Dec. 31, was unusually well attended. The academy expects to have suitable rooms assigned it in the capitol, on the completion of the additions to that building, in which its library and collections can be properly placed. The latter has become doubly valuable since the destruction of the scientific collections of the