

study of these great collections. The geology will be treated of by Mr. Hatcher, the Tertiary invertebrates by Dr. Ortmann, the fossil vertebrates by Messrs. W. B. Scott and Hatcher, and the recent birds by Mr. W. E. D. Scott.

It is difficult to exaggerate the value of Mr. Hatcher's and Mr. Peterson's long and arduous labors. Materials have now been gathered that will make possible the solution of many vexatious and much discussed problems, and for the first time a full and representative collection of the wonderful fossil mammals of Patagonia has been brought to a Northern museum. We can, at last, directly compare the Tertiary mammals of the Northern and Southern Hemispheres, and may hope to reach some definite conclusions concerning the mutual relations of these two faunal assemblages.

A LONG PHOTOGRAPHIC TELESCOPE.

LAST spring a plan was proposed at the Harvard College Observatory for the construction of a telescope of unusual length for photographing the stars and planets. Anonymous donors have now furnished the means by which this experiment may be tried. The plan will, therefore, take definite shape, and it is expected that a telescope, having an aperture of 12 inches and a length of a hundred feet or more, will be ready for trial at Cambridge in a few weeks.

EDWARD C. PICKERING.

HARVARD COLLEGE OBSERVATORY,
October 12, 1899.

SCIENTIFIC NOTES AND NEWS.

WE announce with great regret the death on October 16th, of Dr. Edward Orton, the eminent geologist, professor in the Ohio State University, president of the American Association for the Advancement of Science.

DR. J. T. ROTHROCK has been reappointed for a term of four years, State Commissioner of Forestry for the State of Pennsylvania.

PROFESSOR GEORG STEINDORFF, the director of the Ägyptologische Sammlung at Leipzig, has, says *Nature*, obtained leave of absence for six months to enable him to undertake a scientific journey to Africa.

It is stated in *Natural Science* that Dr. Robert Logan Jack, late Government Geologist for Queensland, and special commissioner in charge of the exhibits at the Greater Britain Exhibition, has accepted an appointment from Mr. Pritchard Morgan to run some mining concessions in Szechuan, Korea, and North China. Dr. Jack sailed in September.

At a sitting of the International Geographical Congress on October 2d, it was announced that Dr. Scott Keltie had received a telegram from Mr. H. J. Mackinder, the reader in geography at Oxford, who has just succeeded in reaching the summit of the hitherto unscaled Mount Kenia (about 18,000 feet), in British East Africa. Mr. Mackinder left England in June last in command of an expedition subsidized by the Royal Geographical Society. The telegram, which was sent *via* Mombasa, states that some 15 glaciers were found upon the mountain.

DR. G. W. HILL will give a course of lectures on celestial mechanics at Columbia University on Saturday mornings beginning October 21st. The subjects treated will be:

- I. Delaunay's Method in the Lunar Theory generalized and applied to the Planets.
- II. Gylden's Method of Perturbations.
- III. Gauss' Method with Secular Perturbations.
- IV. General Expressions for the Secular Inequalities of the Solar System.
- V. Poisson's Theorem on the Invariability of the Mean Distances.
- VI. Periodic Solutions in the Planetary Problem.
- VII. The Restricted Problem of Three Bodies.
- VIII. General Considerations on the Stability of Motion of Planetary Systems.

PROFESSOR R. W. WOOD, of the University of Wisconsin, having received several inquiries as to whether he could furnish lantern slides of the plates illustrating his article on the photography of sound-waves, which appeared in the *Philosophical Magazine* for August, has placed the original negatives in the hands of Miss Blanchard Harper (Madison, Wis.), who is prepared to supply slides from any or all of the plates at a nominal cost. The slides will be found useful in teaching, showing as they do the wave fronts by reflection from all sorts of surfaces, refraction, diffraction, Huyghens' principle, etc.