several Nicaraguan streams have lost their headwaters to the Rio Grande, which enters the Pacific at Brito; and the point where one of the now beheaded Nicaraguan rivers rises on its old valley floor is the lowest pass on the present continental divide, and hence is selected for the path of the canal from the lake to the ocean. A fuller discussion of the region is given by the same author in *Bulletin of the Geological Society of America* (x, 1899, 285–348).

THE PLAINS OF RUSSIA.

A NOTE in SCIENCE, May 2, 1898, was in error in describing the plains of central Russia as dipping under the drift sheet on the northwest. The plain is continuous across the older rocks and the drift sheet of the first glacial invasion, and both areas are to-day dissected similarly by valleys. Philippson returns to this subject (*Pet. Mitt.*, xlv, 1899, 269–271) to emphasize his conclusion that the paleozoic and mesozoic area of the plain is a surface of denudation, now broadly uplifted and somewhat dissected; the denudation being completed contemporaneously with the formation of the drift plain. The rivers may have followed shallow depressions in the surface of the great plain, but the valleys of to-day are undoubtedly the work of erosion after uplift, and hence all of quaternary date. Even the broad and unsymmetrical valley of the Volga is held to be of later origin than the first glacial epoch. Small rivers have cut valleys 100 meters deep, either entirely in the older rocks, or in the drift area, or passing back and forth from one to the other. Most of the valleys are of a considerable width already, with well graded floors; but where the Dneiper crosses the granite swell of southwestern Russia there are rapids in its course. Philippson urges that the solution of morphological problems of this kind should not be postponed until the completion of detailed geological surveys, but that they should be studied during the prosecution of the surveys; he also wishes fuller information from the Russian geologists concerning the date of folding in the Urals and of their later upheavals after extensive denudation.

THE AMALFI LANDSLIP.

THE Boston *Transcript* of January 13th gives a translation from an Italian newspaper, *La Tribuna*, describing the landslip at Amalfi on December 23d, last. For several days preceding the disaster a trembling motion had been noticed in the mountain over the town and many peasants had left their houses. Early on the morning of the 23d, a noise like that of splitting wood was heard in Hotel Santa Caterina on the mountain slope, and a crack was found in one of the walls. A man from a quarry brought news that a small fissure had opened in the mountain side. Soon afterwards stones began to roll down the steep slope at more and more frequent intervals, and then a mass of rock estimated at 30,000 cubic meters broke away from the mountain and fell with terrible noise, crushing everything in its way and raising a dense cloud of dust. Some peasants working on the upper slope saw a long fissure open 'beneath their feet' and had only time to leap aside before the ground on which they had been standing broke away and fell. Others working at a lower level were killed. The sliding mass swept away a peasant settlement on the upper slope, buried the Hotel Caterina, crushed one end of the old monastery known now as the Hotel Cappuccini, a favorite resort of travellers, and then ran into the sea, destroying two boats, capsizing two others, and obstructing the shore waters. The highway near the shore was covered and all travel on it was suspended for fear of later disasters. Along the track of ruin for some distance up the mountain side, houses are demolished, trees uprooted, and gardens overwhelmed. A number of lives were lost, and the damage is estimated at over 1,000,000 lire.

W. M. DAVIS.

CURRENT NOTES ON METEOROLOGY.

A NOTEWORTHY BALLOON VOYAGE.

AN interesting point in connection with a recent balloon trip is noted in the *Zeitschrift für Luftschiffahrt* for December. The trip in question was made by MM. de Saint-Victor and Mallet, starting from Paris on September 30th last, at 6:15 p. m., and landing near Vestewick, in Sweden, on the evening of the following day. The duration of the trip was 23¼ hours, and the distance passed over was 1330

kilometers, or about 825 miles. The point referred to concerns the effect of a water surface upon the temperature of the air at the altitude of the balloon (about 500 meters). At about 9 a. m. on October 1st the balloon began to drift over a part of the Baltic Sea, and the aëronauts at once noticed a fall in temperature and an increased humidity in the air through which they were moving. In consequence of these changed conditions, the balloon began to descend, and it was necessary to throw out ballast in order to maintain it at a proper altitude.

THE BAGUIOS OF THE PHILIPPINE ISLANDS.

In the *Monthly Weather Review* for October, Abbe notes that in speaking of tropical cyclones, the word *cyclone* should uniformly be employed for all revolving storms, or else that names should be used which have a widespread local usage. Thus the term *hurricane*, which has its root in the Carib word *ourgan*, should, at least in English works, be restricted to the violent tropical cyclones of the North Atlantic Ocean. *Typhoon* has been the recognized designation of the revolving storms of the China Sea for many years. And now the term *baguio*, which is commonly used by the Tagalogs and Viscayans seems likely to come into use. *Baguio* is the name universally applied in the Philippine Archipelago to the storms that, after they pass westward over the Archipelago, become *typhoons* on the coast of China.

THE DROUGHT IN INDIA.

It has for some time been the custom of the Indian Meteorological Department to issue long-range forecasts of the monsoon and cold weather rains in India. From *Nature* for January 11th we learn that this year the forecast of the cold weather (December–February) rains in northern and central India anticipated a rainfall slightly above the normal. The prediction has unfortunately not been verified, as an area comprising nearly two-thirds of India is now suffering from the most severe drought of the century, and there does not seem, at present, to be any immediate chance of a change for the better.

METEOROLOGICAL CHART OF THE GREAT LAKES.

There has been issued by the Weather Bureau a publication entitled *Meteorological Chart of the Great Lakes: Summary for the Season of 1899*, by A. J. Henry and N. B. Conger. This quarto pamphlet summarizes the information contained in the monthly meteorological charts of the Great Lakes, issued throughout the navigation season. The discussion concerns the storms of the year; precipitation and the possibility of evaporation in the Lake region; fog; ice during the winter of 1898–99, and the wrecks and casualities which occurred during the year. A dozen charts illustrate the text.

R. DEC. WARD.

WAGNER FREE INSTITUTE OF SCIENCE.

The lectures for the spring term at the Wagner Free Institute of Science will commence on Monday, February 12, 1900. The following is the schedule:

Mondays, Dr. Henry Leffman, 'Chemistry.'

Tuesdays, Professor W. B. Scott, 'Dynamical Geology.'

Wednesdays, Professor R. E. Thompson, 'American History, 1783–1865.'

Thursdays, Professor G. F. Stradling, 'Heat.'

Fridays, Professor S. T. Wagner, 'Metallic Materials of Engineering Construction.'

Fridays, Professor T. H. Montgomery, 'Invertebrate Animals.'

Saturdays, Dr. Emily G. Hunt, 'Some Aspects of Botany.'

At the annual meeting at the Institute Mr. G. H. Cliff, formerly president of the Girls' Normal School, was elected a trustee to succeed the late Richard B. Westbrook, Esq.

From the report of the Actuary it was learned that 13,828 persons had attended the Fall course of lectures, that 28,378 persons had used the Reference Library and that the Branch of the Free Library had circulated 269,618 volumes for home use; 1327 books and 2226 pamphlets and magazines were added to the Wagner Institute Reference Library during the year. The report dwelt at some length upon the splendid collection of government documents owned by the Institute, probably the best in the City of Philadelphia, which was now classified and was being thoroughly catalogued. The thanks of the Board were extended to the officers of the Spring Garden Institute for an important addition to this collection.