

Educator (Terre Haute, Ind.) in the hope of cultivating an appreciative study of local physiography in the Indiana schools. In the April number, two outline maps exhibit hypothetical restorations of several stages of the glacial lakes in relation to the moraines, the retreating ice front and the temporary outlets. As several of the terminal moraines constitute the most important local reliefs of the level prairies of Indiana, and as one of the earlier lakes overflowed across northern Indiana to the Wabash and thence to the Ohio, passing the site of Fort Wayne, the subject is a pertinent one for an educational journal, and deserves more emphasis than it commonly receives in the schools. The Science department of the *Educator*, conducted by Prof. C. R. Dryer, of the State Normal School at Terre Haute, proposes to follow Taylor's essay with others of local physiographic bearing prepared by investigators of acknowledged competence, and in this plan they set a good example that deserves imitation.

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CURRENT NOTES ON METEOROLOGY.

WEATHER BUREAU KITE-FLYING.

THE past year has witnessed a very notable development in scientific kite-flying in this country. In Washington the Weather Bureau has, under the direction of Prof. Willis L. Moore, Chief of the Bureau, been carrying on an extended investigation into the best kinds of kites for use in sending up meteorological instruments. Prof. C. F. Marvin has recently minutely described the kind of kite now in use by the Bureau (*Mo. Weather Rev.*, Nov., 1895). This kite is a modification of those used by Hargrave in Australia, and is not at all like the ordinary kite. Instead of being flat, and tapering at the lower end, as in the usual form, these kites are box-shaped, with their ends open and their sides partly covered with

cloth or silk. This style of kite, which has also been in use at Blue Hill for some months, is found to be admirably adapted to the purpose for which it is intended, and when fine piano wire is used to hold it, instead of twine, is a splendid flyer. The next few years will undoubtedly witness many improvements in kites used for meteorological purposes, and the United States seems to be distinctly in the lead in this work at the present time.

BALLOONS AND KITES IN CLOUD OBSERVATIONS.

IN connection with the cloud observations to be made during the International Cloud Year (see *SCIENCE*, May 1, 1896, 661) the suggestion is made by Kremser (*Meteorologische Zeitschrift*, April, 1896, 143-144) that the extended use of small pilot balloons would result in giving us much valuable information as to the air currents in and around clouds. These balloons, which can be made at slight expense, reach considerable altitudes, and are especially useful in indicating the drift of the air currents when there are no clouds in the sky, the direction of the lower currents when only upper clouds are visible, etc. Clayton, of the Blue Hill Observatory, has for some time been using kites to help in determining the altitudes of the base of stratus and nimbus. These clouds, which so often cover the whole sky with a uniform sheet, can only have their heights determined under the most favorable circumstances if the ordinary theodolite is used.

BLUE HILL KITE-FLYING.

THE work done at Blue Hill Observatory with kites was outlined by Clayton before the Boston Scientific Society at a recent meeting (Boston Commonwealth, May 9, 1896, 12-13). The kites at present in use are the Eddy, or tailless, and the Hargrave, or box kite. Continued experiments at Blue Hill have resulted in the development

of scientific kite-flying on a remarkable scale. Recent ascents have reached altitudes but little short of a mile above sea level, and excellent records have been obtained by means of a self-recording instrument made by Fergusson, of the Blue Hill staff, which gives automatic readings of temperature, pressure, humidity and wind velocity. Mr. Rotch, the proprietor of the Observatory, has now had constructed for him by Richard *Frères*, of Paris, an aluminum instrument weighing less than three pounds, which records pressure, temperature and humidity. The meteorological results already obtained are of great value, and the full discussion of them is awaited with interest. Among the most important matters that have been noted is the presence of cold waves and warm waves at considerable elevations some hours before the temperature changes are noted at the earth's surface. The prospect of improving our weather forecasts by such soundings of the free air is very encouraging, and it is more than likely that before long some practical use will be made of these discoveries.

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SCIENTIFIC NOTES AND NEWS.

THE fifth session of the Hopkins Seaside Laboratory, of Stanford University, will open on June 15th. It will continue for six weeks, but investigators may remain in residence throughout the summer. The laboratory, which includes two buildings well equipped for instruction and research, is located at Pacific Grove, on the Southern shore of Monterey Bay, about four hours' distant from San Francisco. To investigators prepared to carry on original work the use of the Laboratory and its equipment is tendered free of charge, and its location offers unusual advantages to students from the Eastern States wishing to become acquainted with the fauna and flora of the Pacific. The laboratory is under the direction of Professor O. P. Jenkins and C. H. Gilbert, with the assistance of other instructors from Stanford University.

MR. GRIFFITH, Secretary of the British Association for the Advancement of Science, is now in America to make arrangements for the meeting of the British Association in Toronto in 1897. On May 19th he was the guest of Prof. Putnam, Permanent Secretary of the American Association for the Advancement of Science. The two Secretaries passed the morning in discussing various matters relating to their respective Associations. It is the intention of the American Association to arrange the time and place of its meeting next year so that members of the American and British Associations can attend both meetings, and as the British Association will probably hold its meeting on August 18-25 it is suggested that the American Association hold its meeting August 30 to September 4. A few Harvard professors, prominent in the Association, met Mr. Griffith at the Colonial Club, and the afternoon was spent in visiting several departments of Harvard University. On Wednesday Mr. Griffith visited the Harvard Medical School and other places of interest in Boston, and in the evening he left for Ottawa in order to meet the members of the Royal Society of Canada before their adjournment on Friday. From there he goes to Toronto to arrange with the local committee for the meeting of the British Association.

THE Secretary of the Smithsonian Institution has leased for another term of three years, for the benefit of American students, one of the tables at the Naples Zoölogical Station. This was done in response to requests from a large number of colleges and universities, and to resolutions from the principal natural history societies in the country, and a petition signed by over four hundred biologists. During the last three years the following universities and colleges have been represented; that is to say, the occupants of the Smithsonian table have been either graduates of those universities or professors in their faculties:

Clark University, Worcester; University of Chicago; Brown University; University of Michigan; Kentucky State College; John Hopkins University; Kansas Agricultural College; Bryn Mawr College; Wesleyan University; Iowa Agricultural College; Leland Stanford Junior University; Olivet College, Michigan.