

half-drowned Penobscot valley. Small modifications of form are ascribed to glacial action. The processes of to-day cut back the salients and fill the re-entrants of the shore line.

• 'GLACIAL flood deposits in the Chenango Valley,' described by A. P. Brigham (Bull. Geol. Soc. Amer., VIII., 1897, 17-30), are good examples of forms produced by the constrained drainage of the retreating glacier, passing from the Mohawk valley, over a divide and through the plateau country on the south, to the Susquehanna.

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#### CURRENT NOTES ON METEOROLOGY.

##### WINTER STORMS ON THE COAST OF CHINA.

Two noteworthy publications come to us from the Shanghai Meteorological Society. They are the 3d and 4th Annual Reports of that Society, and were prepared by Rev. S. Chevalier, the energetic President of the Society, and Director of the Zi-Ka-Wei Observatory, at Shanghai. The first is entitled an 'Essay on the Winter Storms of the Coast of China,' and the second, which is really a part of the same investigation, concerns 'The Variations of the Atmospheric Pressure over Siberia and Eastern Asia during the Months of January and February, 1890.' Both of these monographs furnish valuable information concerning the meteorology of the eastern coast of China. Among the results of Father Chevalier's study we note the following: The cyclones which travel across Europe and reach western Siberia experience great difficulty in crossing this region, and are generally driven off towards the North Pole by the anticyclone over Siberia, but some may cross the whole of Asia directly from west to east, or else may be deflected to the southeast towards China. These depressions over Siberia affect the weather on the coast of China indirectly. There are, in addition, cyclones

developed over China or further west, which cross the Chinese coast with an east or northeast movement, and it is such cyclones as these that precede the winter storms on the coast of China. The gale in these storms bursts more or less suddenly after the passage of the center, and depends for its violence on the depth of the depression, as well as on the height of the succeeding cyclone in the rear.

##### THE 'ILTIS' TYPHOON.

THE somewhat remarkable typhoon, which resulted in the loss of the German gunboat 'Iltis,' with all her officers and the majority of her crew, during the night of July 23-24, 1896, in the neighborhood of the Shantung Promontory, on the coast of China, has been made the subject of a special study by Rev. Louis Froc, S. J. The results are published by the Zi-Ka-Wei Observatory in a monograph entitled 'The Iltis Typhoon, July 22-25, 1896.' The conclusions reached by the author are interesting. He says: "There is never any advantage in undertaking a struggle with a typhoon. Even with the powerful forces which our great steel liners carry within their breast, prudence is yet in this instance a good adviser, and a safe anchorage is far better than the risks of a wrestle; no time is gained thereby, and the vessel is exposed, if not to a fatal loss, at least to serious damages. Several steamers (in this typhoon) were kept back, despite the force of their engines, in the neighborhood, or even drawn in towards the center of the hurricane." The swell from this typhoon was noted 500 miles in front of the advancing center. There was a marked fall of the barometer 310 miles from the center, and the lowest pressure recorded was 27.97 inches.

##### ANGOT'S 'THE AURORA BOREALIS.'

AN English translation of Angot's 'Les Aurores Polaires' appears as Vol. LXXVII.

of the International Scientific Series (D. Appleton & Co.). This book has already been reviewed in *SCIENCE* (Vol. II., 107-108), so that extended comment on the translation is not necessary. The volume presents an interesting and complete account of the aurora in all its aspects, and will prove a valuable addition to scientific libraries. We note that the title page and cover give the title as 'The Aurora Borealis,' while the headings on the even pages all through the book give it as 'The Polar Aurora.' There are several illustrations of different forms of the aurora, but we do not find any index.

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#### CURRENT NOTES ON ANTHROPOLOGY.

##### THE JEWISH PHYSICAL TYPE.

THE peculiar physical type which we call 'Jewish' is as easily recognizable in the sculptures from Tello and Nippur, carved two or three thousand years before the Christian era, as it is in the satirical comic papers of our own day. The most prominent trait is the nose, which has the curve of an italic figure 6 reversed.

This is sometimes called the Semitic type, but erroneously, as the purest Semites, the Arabians of the desert, do not exhibit it. We must, therefore, seek its origin elsewhere. In an article read before the Munich Anthropological Society, printed in the *Correspondenzblatt* for January, Professor Oberhummer agrees with von Luschan in attributing it to the ancient Anatolian people, probably of Caucasian (Alarodian) affinities, residents in Armenia before the Aryan Armenians possessed the land, and whose branches were the Elamites and Susians of the south. These, by intermarriage with the Semitic invaders, impressed upon them this physical type, though not their language or culture.

This theory does not fully explain the prevalence of this type in Palestine, unless we allow a larger intermingling there of foreign blood than has been customary with historians.

##### ON WAMPUM RECORDS.

THE last scientific contribution prepared by our late eminent colleague, Mr. Horatio Hale, is printed in the *Journal of the Anthropological Institute* for February, 1897. It is entitled 'Four Huron Wampum Records; a study of Aboriginal American History and Mnemonic Symbols.' His usual patient research and careful deduction are well exemplified in it. The manufacture of wampum, its earliest use as a form of record, and the origin and meaning of the symbols woven into the belts, are fully discussed. Much collateral information on the history of the Hurons and Iroquois and on the formation of the famous 'League' is added.

A note is appended by Professor E. B. Tylor, which reviews Mr. Hale's conclusions and suggests further lines of research relating to the subject. He argues that the wampum *belt* had its origin among the Iroquois.

The studies on this question are yet far from completeness, as wampum was merely a method of arranging beads for mnemonic symbols, a custom widely prevalent in savagery and branching in many directions.

##### THE OTOMIS.

ACCORDING to the traditions of the Aztecs, their predecessors in Central Mexico were the Otomis, an undersized dark people, described as stupid and barbarous and speaking a tongue most cacophonous and difficult. Many thousands of them still survive on the Mexican plateau, but our actual knowledge of them is very scant.

A few years ago Judge Eustaquio Buelna published a grammar and dictionary of their language, composed by a Jesuit mis-