Other instances of the stranding of whales are reported by the same classic author.

C. R. EASTMAN.

CURRENT NOTES ON METEOROLOGY.

LANTERN SLIDES FOR TEACHING METEOROLOGY.

THE Geographic Society of Chicago has done an excellent work for the development of meteorological instruction in the United States. It has collected a set of 270 lantern slides of various meteorological subjects. It has published a good descriptive text to accompany them. It sells the slides at cost. This is one of the more important meteorological contributions along educational lines which has been made in this country within the last few years. The plan was inaugurated in 1905 by Dr. J. Paul Goode, then president of the Chicago Geographic Society, and on the committee which was put in charge of the work were Dr. Goode, Professor Henry J. Cox, of the U. S. Weather Bureau in Chicago, the chief observer of the Weather Bureau in Chicago, and three teachers. The slides are copied from maps and diagrams in the *Atlas of Meteorology*, recent text-books, and in the *Monthly Weather Review;* from photographs, and from weather maps and weather records selected and prepared by the committee. A wide range of subjects is covered, and any teacher of meteorology, climatology or geography will surely find many slides suitable for use in his particular line of teaching. The text to accompany the slides embraces 130 pages. It includes a 'General Introduction,' by Professor Cox; a paper on 'The Use of the Lantern in Teaching Meteorology,' by Dr. Goode; a short working bibliography for the use of teachers, and then the descriptive text (110 pages). The latter is subdivided according to the subjects covered by the slides, including the following: weather observatories; meteorological instruments and instrument records; temperature distribution; atmospheric pressure and circulation; sunshine and other optical phenomena; humidity, cloudiness and precipitation; cyclones and anticyclones; thunderstorms and tornadoes; floods; synchronous weather conditions; life response to climate. This descriptive text is almost a small text-book in itself, and will be very helpful to teachers (unless perchance it be so complete that it tempts them to limit their reading to this alone). We welcome most heartily the Chicago Geographic Society's valuable contribution to meteorological education.

LAND AND SEA BREEZES ON THE GERMAN COAST.

THE phenomena of land and sea breezes on the eastern coast of Germany bordering the Baltic have been studied by Max Kaiser, of Halle ('Inaugural-Dissertation,' Halle, 1906), who has made use of anemograph records for the period 1901–5 at five stations extending over a strip of 300 miles of coast-line; of the observations taken thrice daily at storm-warning stations of the Deutsche Seewarte, and of observations on light-ships and on passing vessels. The sea breeze was found to begin at various times, often at 8 A.M. and often not until 2 P.M. or later. The absolute maximum velocity was 13.2 miles per hour; the absolute minimum was 0.8 miles per hour. The mean velocity is 4.5 to 6.7 miles per hour. April to September are the months of occurrence. Only those days were taken as sea-breeze days which had an offshore wind early, an onshore wind at noon and an offshore wind again in the evening. The 'roundabouts' which have been noted on the New England coast and in other places are but partially developed on the Baltic coast of Germany. An interesting study of the place of beginning of the sea breeze, based on observations from vessels offshore, makes a decided addition to our present knowledge on this subject. In the region under discussion the sea breeze, when conditions are favorable, begins between four and five nautical miles offshore, and the land breeze extends as far out as eight nautical miles.

MONTHLY WEATHER REVIEW.

No. 8, Vol. 34, 1906, of the *Monthly Weather Review* contains the following papers: 'The International Symbols,' by H. H. Clayton. It is pointed out that the American term 'frostwork' is equivalent to the German 'Rauhfrost,' and the English term 'silver thaw' is the equivalent of the Amer-

ican 'ice storm.' 'The Meteorological Optics of Professor J. M. Pernter' is a review of Pernter's standard work, recently published, by Professor R. W. Wood. 'The Meteorological Conditions Associated with the Cottage City Waterspout' (August, 1896), by Professor F. H. Bigelow. A full review and discussion of the weather conditions leads to the conclusion that a sheet of cold air, in front of an approaching anticyclone, overran the lower, warmer air, the cold air following at the surface a few hours later. This gave 'the exact conditions required to produce the observed powerful convection.' 'Variation in Temperature over a Limited Area,' by Professor W. I. Milham, of Williams College, embodies the results of studies at Williamstown, Mass., supplementary to those previously discussed in the *Monthly Weather Review* (July, 1905) by the same writer. 'Monthly Review of the Progress of Climatology throughout the World.' This is a comparatively recent addition to the regular contents of the *Review;* the notes are prepared by C. F. Talman, and will be found useful by teachers of meteorology and climatology. 'The First Daily Weather Map from China,' by the same writer, notes the publication of this new map on July 1, 1906.

CLIMATE OF FORT GRANT, ARIZONA.

We note the publication of a paper on 'The Climate of Fort Grant, Graham County, Arizona' in the *Journal of the Outdoor Life* for November. The writer is Dr. I. W. Brewer, and special attention is paid to the relations of this climate to disease.

R. DeC. Ward.

EVENING TECHNICAL COURSES AT COLUMBIA UNIVERSITY.

The Board of Extension Teaching of Columbia University announces a series of nine evening technical courses which will be given at the University this winter, beginning December 3, and lasting twenty weeks. The courses are under the immediate direction of Professor Walter Rautenstrauch, of the Faculty of Applied Science, and are to be given by professors and instructors of the university and other persons especially qualified. Moderate fees ($7.50 to $15) are charged and most of the courses are for two evenings a week. The courses are as follows:

Engineering Physics.—As illustrated in the mechanical plants of modern buildings. (1) An elementary study of physics: (2) a practical study of steam and electrical machinery, heating, ventilating, water system, wiring, elevators, etc., included in the plant of Columbia University. For two classes of students: those wishing an introductory study of physics as preparation to advanced study in electricity, steam, etc., another winter; those desiring practical training for positions as superintendents of buildings, engineers, janitors, etc.

Elementary Mathematics.—Those parts of arithmetic, algebra, geometry and trigonometry used in technical work. Practice with engineering hand-books, tables, etc.

Drafting.—A beginner's course; fits for positions as draftsmen; reading of drawings, etc.

Strength of Materials.—A lecture course for those who design or manufacture machinery, or modern structures. With this course should be taken either the first or second of the two following courses in design.

Machine Design.—Advanced drafting, computations, and designing for persons engaged in the design and manufacture of machinery.

Structural Design.—Advanced drafting, computations, and designing for those who do structural work.

Electrical Engineering.—A course especially for those engaged in electrical work of any sort.

Steam Engineering.—A course for those engaged in the manufacture or management of steam machinery of any sort.

Special Engineering Problems.—A study of any special elementary or advanced engineering problems desired by the student: Individual instruction will be arranged for such a period of time as the special problem may demand.

The courses will be given in the buildings of Teachers College, Columbia University, at West 120th Street and Broadway, which affords necessary lecture rooms, laboratories, drafting rooms, etc. A complete catalogue of these courses will be sent on request, by addressing Evening Technical Courses, Extension Teaching, Columbia University. Personal information may be secured on Tuesday