had been checked daily by the Naval Observatory signal, and the air was calm and the sea smooth. At 4 P.M. with sun in the southwest the remarkable mirage appeared in the direction of southwestern Iceland. The Snaefells Jökull (4,715 feet) and other landmarks well known to the captain and the mate were seen as though at a distance of twenty-five or thirty nautical miles, though the position of the schooner showed that these features were actually at a distance of 335 to 350 statute miles. A checking observation of the sun made at 6 P.M. gave the latitude at that time as 63° 42′ N and longitude 33° 32′ W. It was warm and rainy; the air had throughout been calm and the sea smooth. Captain Bartlett writes: "If I hadn't been sure of my position and had been bound for Rejkjavik, I would have expected to arrive within a few hours. The contours of the land and the snow-covered summit of the Snaefells Jökull showed up almost unbelievably near."

It should be pointed out that superior or polar mirage is always a phenomenon concerned with great distances and, further, is visible for any given features only within a comparatively limited area. This is because the rays from the object must be directed upward into the warmer air layers of an *inversion*, and these inversions are generally at elevations in excess of a thousand meters where the differences in temperature are represented by a few degrees only. The refraction of the rays necessary to bring them down to the surface of the sea where they would be visible thus represents very flat curvatures and correspondingly great distances. The writer has drawn attention to examples where distances of 100 to 300 miles are involved. The example furnished by Captain Bartlett is somewhat in excess of the examples already described.[1]

WILLIAM H. HOBBS

INDEX TO SCHOOLCRAFT'S "INDIAN TRIBES"

THE monumental six-volume work by Henry R. Schoolcraft entitled "Historical and Statistical Information Respecting the History, Condition and Prospects of the Indian Tribes of the United States." which was published in 1851–1857, represents the first systematic attempt on the part of the Federal Government to study the ethnology and archeology of the North American Indians. Because of this fact and because of the early date at which the information was collected, it will always remain a most valuable source of information on American ethnology.

While this report has proved an important reference work on American Indians for nearly ninety years, its usefulness has been greatly hampered because of the fact that heretofore no index has been available. Mrs. F. S. Nichols, of the editor's office of the Bureau of American Ethnology, has now completed an index consisting of about 22,000 entries on cards, which is available in its present form to ethnologists, librarians and other workers who may wish to make use of it.

Those who can not consult it in person may write to the Editor's Office, Bureau of American Ethnology, Smithsonian Institution, and information requested will gladly be furnished by mail.

M. W. STIRLING

BUREAU OF AMERICAN ETHNOLOGY

AVAILABLE LECTURERS IN GEOLOGY AND GEOGRAPHY

SEVERAL months ago a note in SCIENCE announced a tentative plan to furnish university departments with information regarding distinguished foreign geologists and geographers who may be available for lectures. During the summer and early fall, the names of five scholars who wish to make lecture tours were registered with the Division of Geology and Geography. Some of these men have already arranged to give lectures at several universities, and will be glad to make other appointments. Departments that are interested may secure detailed information by writing to the office of the division.

In this connection, attention is called to the Institute of International Education, which acts as a clearing house of information on available lecturers in all fields of learning. This institute publishes a "News Bulletin," issued monthly from October to May, giving specific information about individual lecturers. The bulletin is published at 2 West 45th St., New York.

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SCIENTIFIC BOOKS

DEVELOPMENTS IN PHYSICS

Atomes, radioactivité, transmutations. By MAURICE DE BROGLIE. 269 pp. Bibliothèque de Philosophie scientifique, Flammarion, Paris, 1939. Paper covers, 22 francs.

WITH the distinctive clarity so characteristic of French authors, M. de Broglie gives an account of the developments in physics during the last thirty years culminating in a discussion of the modern concepts of the atomic nuclei and the transmutation of one element into another. Apart from the more profound philosophical aspects of the recent work in this field, and

[1] W. H. Hobbs, *Ann. Assoc. Amer. Geog.*, 27: 229–240, December, 1937.