the latter being from other evidence less probable.

The spheroids are a brilliant white in color and resemble albite alone, but the microscopic examination reveals considerable orthoclase in addition to the plagioclase, and also much quartz. The quartz fills interstices between the feldspars. The extinction of the plagioclase upon flakes parallel with the basal pinacoid is so slight that the species is in large part oligoclase, but the thin sections give ground for believing albite also to be present and possibly varieties even more basic than oligoclase. The reflections which are given by some broken nodules show that in instances much the greater portion consists of a single feldspar crystal. Others have but few, relatively large individuals; and still others are radiating aggregates. Where the constituent feldspars are coarse and few the core is marked by a few flakes of black biotite irregularly disseminated. They then cease and the main mass of the nodule is feldspar. Even the core may itself practically fail, the nodule becoming a mere ellipsoid of feldspar.

Where the core is well developed it is due to a considerable richness either of biotite or hornblende, both having been observed, but each in different spheroids. They may, however, and probably do occur together. Well-marked rings of biotite or hornblende may also appear half way or two thirds the way from the center to the circumference.

There is no marked outer border to the nodules such as appears in other cases, the contrast being due to the fact that the general matrix is a very dark aggregate of biotite, hornblende, the two feldspars and quartz. The dark minerals are in very large amount, so that the brilliant white nodules stand out with great distinctness.

It appears from the relations of the minerals that the dark silicates first crystallized, together with some feldspar and quartz, and formed the cores. Next followed a period of formation of little else than feldspar and quartz, varied occasionally by a slight separation of the dark silicates. Finally the residue, greatly impoverished by the loss of so much of the feldspathic material, crystallized as the dark matrix.

During the crystallization the pegmatitic streak also formed, and along its borders developed in part as half spheroids. It does not appear to be a phenomenon subsequent to the development of the nodules, and is not very sharply delimited from the spheroidal rock.

The home of the boulder lies somewhere to the north, probably in Ontario, but, so far as known to the writer, no similar rocks have yet been recorded in this region. Acknowledgments are due, in closing, to Professor A. W. Grabau, through whose kind offices the material was secured.

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Present Knowledge of the Distribution of Daimonelix.

Daimonelix when first discovered, in 1891, was thought to be confined to the elevated tablelands of central Sioux County, Nebraska. In the meantime its range has been extended and it is now known almost throughout the entire Arikaree formation, a tract probably about five hundred miles in diameter, situated in Nebraska, Kansas, South Dakota, Wyoming and Colorado. The more fibrous forms of *Daimonelix* constitute a character so constant as to justify the name Fibrous Arikaree for the upper half of the formation. The writer has traced these fossils as represented by the fibrous forms as far south as Benkleman, on the Kansas-Nebraska line, as far east as Fullerton and Long Pine, Nebraska; as far north as Eagle Nest Butte and White Clay Butte, in the Sioux Indian Reservation in South Dakota; and as far west as Lusk, Guernsey and Bates Hole, in Wyoming. Well-authenticated reports would include northeastern Colorado, but those places only are mentioned which have been visited personally by the writer. *Daimonelix* proper is much more restricted than are the fibrous forms. However, its range has been extended beyond the highlands of central Sioux County as far west as Lusk, Wyoming, and as far east as Eagle Nest Butte, South Dakota.

This does not change essentially the original limits ascribed to *Daimonelix,* for outside of Sioux County, where they occur in enormous numbers, they are found sparingly.

In its wider distribution this singular fossil is thought to be represented by a specimen found in Peissenberg, Germany, and described by Dr. Ludwig von Ammon, 'Geognostischen Jahresheften,' 1900, under the title Vorkommen von 'Steinschrauben' (*Dæmonhelix*) in der Oligocänen Molasse Oberbayerns.

ERWIN H. BARBOUR.

THE UNIVERSITY OF NEBRASKA,
December, 1902.

CURRENT NOTES ON METEOROLOGY.

RAINFALL OF INDIA.

THE latest volume of the valuable series of 'Indian Meteorological Memoirs' (XIV., fol., Calcutta, 1902) is a compilation of the rainfall data for 457 Indian stations through the year 1900. In Volume III. of the 'Memoirs,' Appendix A, Blanford had previously given the monthly rainfalls for various periods ending with December, 1886. The present publication will for some years be the authority on Indian rainfall statistics. Considerable interest has always attached to the rainfall at Cherra Poonjee (as the spelling is in the report under consideration), in the Khasi Hills, north of the head of the Bay of Bengal, which has held the record for the heaviest annual precipitation. According to the latest average, carried through 1900, the mean annual rainfall at this station is 457.80 inches. A new subdivision into the northeast monsoon and the southwest monsoon rainfalls, coming respectively in December–April and May–November, will be found useful by students of special problems in connection with the climatology of India.

TORNADO AT GAINESVILLE, GA., JUNE 1, 1903.

IN an account of the Gainesville tornado of June 1 last, published in the *Monthly Weather Review* for June, mention is made of two facts which show clearly the effect of the sudden expansion of the air in enclosed spaces. In one case the walls of a mill 'fell outward, and the roof was lifted into the air and held suspended for several seconds.' The other concerned a standpipe, fifty feet off the ground, and about fifty feet high. This standpipe was about forty feet in diameter, and covered with a sheet-iron cupola. The latter, 'weighing several tons, was lifted bodily from the top of the standpipe, carried high into the air, and dropped about a hundred feet in front of the mill, killing several persons who had thus far escaped danger.'

WEATHER REPORTS FROM VESSELS AT SEA.

IN the same number of the *Review,* Professor A. G. McAdie notes that daily meteorological reports were received at San Francisco from the cable ship *Silvertown,* while this vessel was laying the American trans-Pacific cable. The first report was received when the vessel was 90 miles off shore, and the last when she was about 2,000 miles away. These reports proved of value in making the weather forecasts at San Francisco.

R. DEC. WARD.

THE MOSELEY EDUCATIONAL COMMISSION.

THE members of Mr. Alfred Moseley's commission have arrived in this country to study our educational system. The commission is informal in character, although it includes official delegates from various institutions. It is expected that about two months will be spent in visiting the chief educational centers of the country, attention being paid to the public school system and to higher education. The members of the commission, all of whom, except three who are expected later, have spent the past week in New York City, are as follows:

Arthur Anderson, J.P., Alderman, and Chairman of Technical Instruction Committee of the West Riding County Council. (Nominated by the County Councils Association.)

W. F. Ayrton, F.R.S., professor of physics in the Central Technical College, ex-President Institute of Electrical Engineers.

Thomas Barclay, LL.B., ex-President Paris Chamber of Commerce.