primitive conception Nzambi was a celestial being or force, a Nature spirit like Zeus or Indra, who ruled the sky or controlled the tempest.

Among the Isubu, *e.g.*, a cognate form signifies "heaven," and such is the case also at Cape Lopez. Winwood Read's Mpongwe raised their hands to heaven when they appealed to Njambi to save them from the hurricane; and his Ashira slave pointed in the same direction when questioned on the subject of the deity. The Manyombe regard Nyambi as heaven, and the Basundi call him the "spirit on high"; and according to Kólbe the *otyi* Herero term Karunga Ondyambi = "heavenly bestower," "who gives and withholds rain."

The word bears little evidence of change, and is perhaps of comparatively modern origin.

It appears, therefore, that while the Eastern Bantus, who worship Unkulunkulu, indulge in *ahnen-cult*, the western adherents of Nzambi are more or less Nature worshippers. In this respect they appear to approach the Negroes of the Gold, Slave, and Oil Coasts.

A third and smaller, but very distinct group apply the term Morimo or Molimo to their conception of the deity. I refer to the Barolong, the Basuto, the Batlapin, and other clans, which are generally classed together as the Bechuana tribes. "Morimo" is the singular form of a word the plural of which, barimo, balimo, bedimo, bazimo, is found almost universally among the Bantu tribes to denote the spirits of the dead.

The application of the singular form, Morimo, Molimo, in a specialized and restricted sense to the Supreme Being is confined almost entirely to the Bechuana tribes, and has perhaps been only recently used in this monotheistic sense; although John Pory mentions (in his edition of Leo Africanus, A.D. 1600) Muzimo as the one god of the Monomotápa tribes, and Gravenbroek (A.D. 1695) says of the Kaffirs of Zimboe, "Divinitatem alicum Messimo dictam in lucis summo cultu venerantur."

One other tribe, the Lomwe, who live east of Lake Kilwa among the Namuli Hills, use the word Murimu for God; in this respect differing from their Makoa foes, who worship Mlugu; but this rather leads one to conclude that this tribe is an outlying Bechuana clan. Mr. O'Neill has pointed out the peculiarities of language and architecture which distinguish the Lomwe from their neighbours. W. HAMMOND TOOKE.

Cape Town.

Aurora Borealis.

HAVE any of your readers observed the display of aurora borealis to-night (Wednesday)? I regret that insufficient knowledge of astronomical technicalities does not permit me to describe more exactly the size and position of the display. It appeared between 11 and 11.30 p.m., as white streaks or bands of light, varying in width and intensity, now shooting up a considerable distance, now dying away. It was especially brilliant just to the right of the constellation of Cassiopeia, and this was its furthest eastward limit; it extended more or less across the whole northern sky, and at times was bright enough to dim the stars it covered. The rays appeared to shoot up high into the sky above Cassiopeia. It was a very beautiful phenomenon, and was possibly more distinct in more northern latitudes. WARINGTON STOCK.

S. Paul's Vicarage, Derby, May 18.

THE NEW ELEMENT, MASRIUM.

FURTHER details concerning the new element, whose probable existence was announced in a paper communicated to the Chemical Society at their meeting on April 21, are contributed to the number of the *Chemiker Zeitung* dated May 11. The mineral containing the new substance was discovered in 1890 by Johnson Pacha in the bed of an old river in Upper Egypt long since dried up, but of the former existence of which there are records dating back some 6000 years. Indeed, the name by which it is known in the neighbourhood is "Bahr-bela-Mä," or "river without water." Here and there in the track of the old watercourse are small lakes whose water is of considerable repute for its medicinal value. Specimens of the mineral were sent by Johnson Pacha to the Khedivial Laboratory at Cairo, where it was examined by Messrs. H. Droop Richmond and Hussein Off, the authors of the

paper laid before the Chemical Society. The mineral is found to be a fibrous variety of a mixed aluminium and iron alum containing ferrous, manganous, and cobaltous oxides. In addition, however, to these ordinary constituents, a small quantity of the oxide of another element would appear to be present, having properties entirely different from those of any yet known. This element the discoverers have termed *masrium*, from the Arabic name for Egypt, and the mineral has accordingly received the name of *masrite*. The symbol adopted for masrium is Ms.

The composition of masrite may be expressed by the formula $(Al, Fe)_2O_3 \cdot (Ms, Mn, Co, Fe)O \cdot 4SO_3 \cdot 20H_2O$. The amount of masrium present is very small, averaging only about 0.2 per cent., but by working upon fifteen kilograms of the mineral a considerable quantity of the element in the form of various salts has been accumulated. A typical analysis of masrite published in the Proceedings of the Chemical Society is as follows:—

Water	...	...	...	...	40.35
Insoluble matter	...	...	...	...	2.61
Alumina	...	...	...	...	10.62
Ferric oxide	...	...	...	...	1.63
Masrium oxide	...	...	...	...	0.20
Manganous oxide	...	...	...	...	2.56
Cobaltous oxide	...	...	...	...	1.02
Ferrous oxide	...	...	...	...	4.23
Sulphuric oxide	...	...	...	...	36.78

100.00

Suspensions that the mineral contained some hitherto unknown constituent were first aroused by the fact that when it was dissolved in water, and sulphuretted hydrogen was passed slowly through the solution in presence of acetic acid, instead of the expected black precipitate of sulphide of cobalt a white insoluble substance was first precipitated. This white precipitate continued to form until the new substance in the solution was all used up, when black sulphide of cobalt began to be thrown down. By decantation before the formation of the latter, and subsequent washing with dilute hydrochloric acid, the white substance was isolated in a state of tolerable purity. It was found to dissolve in boiling nitrohydrochloric acid. The solution in *aqua regia* was evaporated in order to remove the excess of acid, and ammonium hydrate added, when a voluminous white precipitate of the hydrate of the new metal was thrown down. The hydrate was washed by decantation, and subsequently dissolved in the minimum excess of sulphuric acid. The solution of the sulphate of the new metal was next evaporated to syrupy consistency, water was added until complete solution was just effected, and the solution mixed with an equal bulk of alcohol. The effect of this addition of alcohol was to cause immediate precipitation of crystals of the sulphate of the new metal, a further crop of which was also obtained upon evaporation. By repeated recrystallization most of the small quantity of iron present was removed. In order to eliminate the last traces of admixed ferrous sulphate, the crystals were redissolved in water, and excess of sodium hydrate added. As the hydrate of the new metal is soluble in excess of soda, the hydrated oxide of iron was readily removed by filtration. Upon the addition of ammonium chloride the white hydrate was precipitated in a gelatinous form; the hydrate was redissolved in hydrochloric acid, and again precipitated and washed. The almost perfectly pure hydrate so obtained was then finally converted to chloride by solution in hydrochloric acid.

In order to obtain data as to the atomic weight of masrium the following determinations were made. A known quantity of the chloride solution was precipitated by ammonia, and the hydrate thus obtained was ignited, and the remaining oxide weighed. A second portion was precipitated by a solution of microcosmic salt in presence of ammonia, and the phosphate obtained ignited