

could not, however, be described without drawings. The chambers in the walls of the cahirs sometimes have built walls, but more generally the latter are composed of stones placed on end or edge, and, when the rest of the cahir is removed, they have a similar construction to *Calliagh Birra*. These chambers can be seen in the Cahirsveen valley, co. Kerry, in the walls of the cahir at the ecclesiastical settlement, on Ardillaun, off the coast of Galway, and in other places.

Surface flag-houses or "fosleacs," like *Calliagh Birra*, occur on Aranmore, in the ancient town near Cleggan Bay, co. Galway, and in various other places, and a somewhat similar type is very common in the rocky hills of Burren, co. Clare; and the latter evidently were constructed as habitations for the people herding cattle on the hills, some of them still being used for that purpose. It is quite easy to make them, or even such structures as *Calliagh Birra* both air and water tight, by stuffing the crevices with grass or heather, and by placing on the roof a "lock" of grass, heather or sods. One or two are found in every good glen in the Burren, and are so placed that a person at them can see the whole glen. In the co. Galway, they are more of the *Calliagh Birra* type; have two or three chambers; two or more of them are often together; and they are built in a good glen, or on a bay of the sea, as if they had been more permanent habitations than those in the Burren. When there is a number of them together, there are always one or two cahirs or liss associated with them, to which the inhabitants of the hamlet could retire when attacked by an enemy. I never was in Glen Columbille, co. Antrim, but from Dr. Fergusson's description of the structure, it is probable they are the remains of old houses.

At the present day, the inhabitants in many of the stony districts of Ireland, if they are building a fence or enclosure, or even a house, will roll to the place, first, all the large stones in the neighbourhood, and place them on edge or end at more or less regular intervals, while afterwards they collect smaller stones and build up the intervals. At any subsequent time the fences or structures may not be required, and they will remove the smaller stones for building purposes to another locality, leaving the large stones standing in row, circles, or more or less regular figures.

In the neighbourhood of Lough Gur, co. Limerick, large flattish stones are numerous, scattered about the surface of the ground, and many of these were used to build raths. These raths are sometimes built entirely of stones, but more often they were formed of stones and clay. Some of these raths are still entire, but in others the clay has been removed, and the only remains left are circles of huge standing stones. Such circles in other places would be a puzzle, and are very similar to some of those figured by Dr. Fergusson; here, however, their origin is quite apparent. In some of the mountain districts of Ireland there are the remains of the ancient "boleys" or cattle steadings, built as night shelter for the cattle when sent to graze on the mountains, as in many places the present names of the localities point to their ancient use, and in some places these remains now only consist of standing stones, often in circles. In England steadings would also have been necessary to protect at night the cattle grazing on the downs and other wild places, especially as long as there were wolves in the country. This also may account for stone circles being more common in England than in Ireland, for in the latter country there are numerous forts into which the cattle could be driven at night, and where the forts existed we do not find the ruins of boleys. In England, however, except in a few districts, forts are uncommon, therefore cattle steadings were necessary as long as the wolves existed, but after they became extinct such structures were unnecessary, were allowed to go to ruin, and their original use was forgotten. In the neighbourhood of large circles there are always smaller ones, which, it is unlikely, could have been steadings. If, however, we only look at what is going on at the present day we find that where cattle are housed there must also be fodder,

and to store the fodder enclosures have to be made, either of clay or stone. In Ireland of the present day, in similar wild places, for such purposes, they build small circles; if of clay, when deserted for a time, they have all the appearances of small liss, and often are marked as such on the Ordnance maps, while the only remains of many of the stone fodder enclosures are small circles of standing stones, the smaller stones having been removed. Even the interments, being found more usually outside than inside circles, would go to prove that the latter were not sepulchral, as the inhabitants would bury their dead near their folds, but not in them. I do not for a moment wish it to be believed that none of the different rude stone monuments were erected as monuments or for sepulchral purposes, as I know that many structures, similar in appearance to those I have mentioned have been so used; but I wish to point out that rude stone monuments, although very like in aspect, may originally have been constructed for quite different uses.

G. HENRY KINAHAN.

#### CAZEMBE.

Trieste, Sept. 3, 1873.

IN a notice of 'The Lands of Cazembe' (*Athenæum*, August 30, 1873), translated by me, and lately published by the Royal Geographical Society, I read these words:—

"Gamitto's book is of interest throughout, and might, we think, be with advantage translated in full at some future time. The narrative of Ladislaus Magyar is, however, of still more importance, since it describes vast regions of south-western Africa, where Livingstone himself has never been."

Many years ago I prepared my copy of 'O Muata Cazembe' (Monteiro and Gamitto's book) for translation, when, hearing that my valued friend, Dr. Beke, had been in the field before me, I took no further steps.

As regards Ladislaus Magyar, allow me to state that, after duly obtaining at Pest the permission of Prof. Hunfalvy, the editor, I have persuaded the Rev. R. C. G. O'Callaghan, Consular Chaplain, Trieste, to undertake the translation, and I hope that it will soon appear, with notes by myself.

RICHARD F. BURTON, F.R.G.S.

#### Science Gossip.

WE learn that Dr. Schweinfurth's great work, 'The Heart of Africa,' to which we referred in the spring, is now making rapid progress towards completion. Travelling, not in the footsteps of Sir Samuel Baker, but in a westerly direction, the Doctor reached the neighbourhood of Baker's Lake, and, passing through the country of the Niam-Niam, he remained for some months in the hitherto unknown kingdom of Monbutu. In a geographical sense, his book will contribute in an important degree to the solution of the Nile problem; and ethnologically, it will tend to set at rest the disputed question as to the existence of a dwarf race in Central Africa. Dr. Schweinfurth is an accomplished draughtsman, and his work, which will form two octavo volumes, will be elaborately illustrated from his own drawings. The work will be published simultaneously, in London, by Messrs. Sampson Low & Co.; in Leipzig, by Mr. Brockhaus; in Paris, by MM. Hachette & Co.; and in New York, by Messrs. Harper Brothers.

THE following note, relative to the formation of a Physical Society, is from Dr. Frederick Guthrie, of the Royal School of Mines, Jernyn Street. It deserves attentive consideration:—"I wish to try to form a Society for Physical Research: for showing new physical facts and new means for showing old ones; for making known new home and foreign physical discoveries, and for the better knowledge one of another of those given to physical work. You who care for the being of such a Society, and who are willing to help in its making, are hereby asked to write to me to that purpose before the 1st of October next. Whereupon you will be

asked to meet so as to talk over the means.—24, Stanley Crescent, Notting Hill, W."

THE three small planets discovered in France last year have received the names Liberatrix (in honour of M. Thiers), Vellida, and Johanna. The five planets which still remain without names were all discovered by Prof. Watson, of Ann Arbor, Michigan, U.S., three last year and two this.

THE Social Science Congress, which meets at Norwich next month, is to be received with more than ordinary hospitality. There are to be two *soirées*, one given by the Local Committee, the other by the Mayor (Sir Samuel Bignold). The Choral Society have offered their services for a concert, and St. Andrew's Hall, which has been given up to the Congress for the week, is to be splendidly fitted up for the occasion. The United Kingdom Alliance put in a request for the use of the hall on one of the evenings, but the Local Committee refused the application. It is rumoured that the ladies are not regarded with any special favour by the Norwich people, and that there is some unwillingness to receive them as guests. Be that as it may, the ladies are to have it all their own way, for one day at least, in the Educational Section.

A WORK on 'The Birds of Shetland,' by the late Dr. H. L. Saxby, is about to be published under the editorship of his brother, the Rev. S. H. Saxby. The work will include observations on the habits, migration, and occasional appearance of the birds; and as the author is said to have added more than fifty species to the Shetland list, it promises to be an important contribution to ornithological literature.

THE evening discourses at the forthcoming meeting of the British Association, at Bradford, will be delivered by Prof. W. C. Williamson, of Manchester, who takes for his subject 'Coal and Coal-plants'; and by Prof. Clerk Maxwell, of Cambridge, who will discourse 'On Molecules.' We observe that some of our contemporaries fail to distinguish between Prof. A. W. Williamson, the chemist, of University College, London, who is President-Designate of the Association, and Prof. W. C. Williamson, the biologist, of Owens College, Manchester, who will deliver the lecture on Coal. Sir Samuel Baker may perhaps be present at the meeting.

AMONGST the many important industrial papers recently brought before the Iron and Steel Institute, there was one of great scientific interest, to which we desire to call attention. It was 'The Rationale of the Combustion of Gases considered in relation to an increased supply of Heat,' by M. Charles Boutmy, of the École de Liège. This communication has a most important bearing on the utilization of the gases of blast-furnaces.

IT is worthy of remark that Prof. T. Thorell, of Upsala, has lately advocated the introduction of a common scientific language; and, as in these days a return to Latin is neither to be expected nor desired, he considers it not improbable that English may at some time succeed to this position. This he believes not only because English is far more widely diffused than any other tongue, but also because it can, by most Europeans, be more easily acquired than any other language. Prof. Thorell has given us an earnest of his belief by writing his recent work, 'Remarks on Synonyms of European Spiders,' entirely in English—in such English, too, that none of our countrymen need be ashamed to own it.

A COLLECTION of freshwater fishes, made at Shanghai by H.M. Consul, Mr. R. Swinhoe, has been reported on by Dr. A. Günther, of the British Museum. The collection is notable for containing an unusually large proportion of new species, or such as have hitherto been but imperfectly known.

TO the current number of the *Annals and Magazine of Natural History*, Dr. J. E. Gray, of the British Museum, contributes an essay 'On the Siliceous Spicules of Sponges.' He proposes a simple scheme for the systematic arrangement