

Johnston's connection with the settlement. Chapters follow on the slave trade and on the European settlers; future additions to the ranks of the latter are advised in an appendix that civilisation has reached a stage in the Shire Highlands which makes a dress suit more useful than a pith helmet. A special chapter is devoted to the missionaries, to whom the country owes much; the debt is fully acknowledged, but the missionaries are reproached for the cant and the inaccurate reports written to "gammon" the British public.

The last four chapters of the book deal with the natural history. The botanical section includes a valuable list of Nyasaland plants compiled by Mr. J. H. Burkill. The first collections were made by Sir John Kirk in 1861 and 1862; and judging from the frequent repetition of the names of collectors in the catalogue, the three principal subsequent contributors have been Prof. G. F. Scott-Elliot and Messrs. J. Buchanan and A. Whyte. The general chapter on the flora calls attention to the most conspicuous and interesting plants; the remark of most general interest in this section is the author's repeated protest against Dr. Russel Wallace's well-known view that the tropics have less gorgeous displays of bloom than temperate regions, an impression, Sir Harry Johnston remarks, "formed from an exclusive acquaintance with the dense forests of Tropical America and Malaya."

The zoological chapter consists of lists of the animals, most of which have been determined by the staff of the zoological department of the Natural History Museum, with general notes by Sir Harry Johnston. The lists of insects are relatively the shortest, but the author confesses to "a sweeping hatred of the insect race" "It is surprising, to my thinking," he remarks, "that our asylums are not mainly filled with entomologists driven to *dementia* by the study of this horrible class." He says he cannot call to mind "one insect that is of any benefit to man . . . with the doubtful exception of the bees and the Cochineal Aphid," ignoring, therefore, the scavenging function of the flies, the chemical and medicinal products of the galls, the silkworm, and other such invaluable servants of man. The author appears most interested in the mammals, among his notes on which some original suggestions are made. With the author's usual courage, he runs a tilt against zoological nomenclature; he objects to Burchell's zebra being regarded as the type of the species "merely because it was the first one to be discovered"; and then renames the species *Equus tigrinus*. The varieties *burchelli*, *chapmani*, and *granti* he regards as only varieties of *Equus tigrinus*; while the name *Equus crawshayi*, that of the Nyasaland zebra, is ignored altogether. Sir Harry Johnston's views on phylogeny are as much his own as his methods of nomenclature. He publishes (p. 310) a diagram showing "the origin and relationships of modern groups of Horned Ruminants." According to this novel diagram the giraffe, which is usually regarded as a descendant of *Sivatherium*, is represented as one of the offspring of the Chevrotains. The prongbuck, definitely included by the author among the antlered ruminants, is shown as a branch of the giraffe stem. All the antelopes, sheep, and goats and the musk-ox are derived from the Capricorns, a group which is again a direct descendant from the Tragulidæ or Chevrotains. Early in the work the author tells us that our views on the relations of African mammals may be at any time "upset by unlooked-for discoveries," and too late in the day illustrates this view by referring to *Nesopithecus* (*sic*), a discovery which he describes as of "the most extraordinary importance and interest," apparently unacquainted with the recent literature of the subject.

The last section of the monograph describes the people, and here the author speaks as an expert as well

as an enthusiast. The section includes a most valuable series of vocabularies, and detailed descriptions of the people and their habits. Some of the descriptions, indeed, are probably too detailed; much is recorded, though half veiled in dog Latin, which might have been more appropriately relegated to the pages of a strictly anthropological journal, instead of being published in a work the rest of which is suitable for general circulation.

The author's eulogy of his colleagues, notably the present Commissioner Mr. Alfred Sharpe, and his tribute to the chivalrous courtesy with which the Portuguese always behaved in their relations with him, are instances of the author's tact and fairness, and they illustrate the spirit in which the work is written. The book is in every way worthy of Sir Harry Johnston's industry and scientific attainments, and will remain the most enduring memorial of his seven years' work in the development of the most promising of our tropical African possessions. Moreover, the illustrations, two of which



FIG. 2.—A Male Reedbuck's Head.

are here reproduced by the courtesy of the publishers, are probably the best ever issued in an English book on Africa.

CHRISTMAS MUMMERS.

PROBABLY not a few readers of NATURE have, while staying over Christmas at a country house, been asked into the hall during the evening of Christmas Eve to witness a strange and fantastic rural performance called the mummers' play, and probably, too, they have promptly dismissed the whole thing as an idle and unmeaning piece of country folly. They would have noted, perhaps, the rude dialogue, the characters of St. George, the Prince of Paradine, and the King of Egypt; and they would have concluded that the performance was a faint echo of some miracle play of the Middle Ages, when the Church adopted this means of teaching the people.

Alike in the dismissal and in the uncaredful noting of the characters, these observers of the country folk would have been wrong. The Christmas mumming play is worth attention, and more than mere casual attention.

Like other things which are done by the peasantry periodically, it is done by tradition, and traditional doings have a habit of getting weather-worn, so to speak. Some portions of them will remain fairly prominent, other portions will be more obscured; and so the proper sense of proportion among the different parts of the once perfect whole has disappeared. This is what has happened with the mumming play. St. George and his Eastern companions have remained in undue prominence with reference to other characters, and hence it has come about that the really archaic character of these plays has been lost sight of.

I need not describe the performance. Versions have been printed in the *Transactions* of the Folk-lore Society, and they have been examined scientifically by Mr. Fairman Ordish; but I will try briefly to explain the origin of these mimic representations of forgotten things.

The first thing to observe about the play is that the dialogue is in a state of decay. To restore it to anything like its earlier form would require the careful collation of all the versions with a view of ascertaining the portions that are practically common to all, the portions that are common to only a few variants, and the portions that are unique. This operation needs extension, too, beyond the mere mummers' play, for there are the Pace Egg play, the sword dance, and the Plough Monday play, which have most of the characteristic features of the mummers' play, and cannot but be products of the same original. After the dialogue is duly examined, there is the action of the play to consider. It is remarkable that all the actors in the different parts of the country from North England to Cornwall, however widely they differ in their dialogue and in the names of their characters, differ very little, if at all, in their action. The chief features of this action are found to be (1) the drawing of a circle with a broom for the place in which the play is to be performed; (2) the fight, in which the swords are very carefully locked together round the neck; (3) the death and revivification of the champions; (4) the costume of the characters, partly made of paper to imitate armour, as some writers have thought, but leaves of trees, as I think I shall be able to prove, and partly in imitation of animal characters.

Now in this traditional form of acting and of dressing there is more of archaic survival than in the dialogue part of the play. The circle which is formed for the players to act in is meaningless, unless it be interpreted as a magic ring drawn or constructed by the broom—that is the magic weapon of the witch, about which Prof. Karl Pearson has recently written so ably. The invariable position of the sword leads us to its parallel in the sword dance of the north of England, and hence to innumerable links with Scandinavian ritual. The death and revivification of the warriors is the reproduction of that eternal contest between winter and spring, which is to be found throughout the agricultural ceremonies of the European people, and which Mr. Frazer has examined so thoroughly. The costume of the players, some examples of which, thanks to Mr. Fairman Ordish, are to be found in the Anthropological Museum at Cambridge, connects the characters with the ritual belonging to the tree and animal cults of an almost dateless past. And in the whole thing we have, I doubt not, one of those "manifold though never developed germs of dramatic representation" of which Grimm gives some interesting examples, and which he explains "can be traced up to the most antique festivities."

Let me shortly state the arguments in support of this view. The contest, the death, and the revivification, are the central factors which need explanation, and this can best be done by examining their accompaniments, the setting, so to speak, in which they are embedded. We first of all dismiss the period of Christmas as being the

special period of these mumming plays. It has grown to be so now; but that this is a late growth is shown by the fact that the same play is to be found, performed under another name, the Pace Egg, at Easter, and that significant parts of the same play are to be found performed as the Plough Monday play of early spring time. This agrees with the rule of most of the surviving traditional festivals attached to particular periods or dates of the Christian calendar. They are at some places attached to one festival, in other places attached to another, and it seems certain that these ancient ceremonies were transferred to the Christian season most favourable locally to their continuance, but not necessarily the same period of the year as they were originally performed. Without then fixing upon any of the Christian festivals as the archaic season for the play taking place, we may leave the question of date open, to be settled by other considerations. The next important point is the costume. Examining this carefully from the very modern examples which are preserved, we may conclude that the use of paper is but the adaptation of the cheapest material to be got for the purpose required. Now the paper dress is formed by stitching together a series of small pieces in a sort of scaly fashion, and the only two suggestions to account for this are first scale armour, secondly leaves. Against the idea of scale armour being present in the minds of the rustic performers there is much to be said, and particularly that scale armour is not in accordance with the other conditions of the play. In favour of leaves being intended there are many examples, notably the Jack-in-the-Green of May Day, of such dresses being used in these popular dramas; and, further, there is the fact that some of the mummers, or maskers as the name implies, formerly disguised themselves as animals—goats, oxen, deer, foxes, and horses being represented at different places where details of the mumming play have been recorded. It seems, then, that we have as data for ascertaining the principal features of the mumming play: (1) the undoubted fact of animals being represented; (2) the deduction that trees were also represented; (3) a contest, which resulted in the death of one of the opponents; (4) the restoration of the dead to life. Now mimic representations of an archaic ceremony in which actors take the parts, both of animals and trees, are found all over Europe, and they take place at spring time, just when leaves have once more appeared after the desolation of winter. This association of facts in the spring-time festivals can be equated with the association of facts in the mumming plays with sufficient precision to make it safe to conclude that the equation is due to a descent from a common original.

What is that original? In the personages who are thus slain in mimicry, to adopt Mr. Frazer's language, it is impossible not to recognise representatives of the tree spirit, or spirit of vegetation, as he is supposed to manifest himself in spring. The object of slaying the spirit of vegetation at any time, and above all in spring, when his services are most wanted, is that the divine life, incarnate in a material and mortal body, should be conveyed from the old representative of the god to a new incarnation. The killing of the god is only a necessary step to his revival or resurrection in a better form. Students of Mr. Frazer's work will not need to be reminded of the details of this argument, but I point out that they explain adequately not only the leafy and animal dresses of the English mummers, but the death and revivification of the principal actors; and they find their most archaically developed form in the Norse mythic fight between Thok and Balder, in other words between winter and spring.

What then, it may be asked, is to become of St. George and his Eastern companions, if all, except these, have so great an antiquity? The answer is that they are the later engraftings, and the answer is fortunately one

which can rather confidently be given. Folk-drama, like other branches of folk-lore, needs studying carefully and minutely to see what its chief essentials are. It is clear that the Church could not repress the dramatic representations of the people. So they utilised them. They turned characters belonging to the primitive religion into characters bearing the names of, and having just the slightest resemblance to, Christian characters. St. George was a knight who fought and slew enemies. He was fitted to do the fighting therefore in these old plays. But he did little else. He had to conform to traditional ways, if he introduced non-traditional speeches. He had to see his slain enemies restored to life, and he had to dress in the traditional manner and meet the traditional animal characters. Except, indeed, for the names of the characters there is nothing in these mumming plays really belonging to Christian knighthood and feudal nobility. No one would dream of attributing to them any of the dignity of romantic chivalry; they remain as they were originally, traditional representations of popular festivals. There is only the rudest action and the most archaic ideas; and it is not difficult, therefore, to get rid of the thin veneer of ecclesiastical influence in order to search for the more archaic relics underneath.

LAURENCE GOMME.

NOTES.

At a meeting on December 15, Sir W. H. Flower, K.C.B., F.R.S., was elected an Associate of the Royal Academy of Sciences of Belgium.

PROF. G. CAREY FOSTER, F.R.S., will resign the Quain Professorship of Physics, University College, London, at the close of the present session.

DR. AUGUSTUS D. WALLER, F.R.S., Fulleren Professor of Physiology and Comparative Anatomy at the Royal Institution, has resigned his chair.

It is with deep regret that we announce the death of Prof. T. Jeffery Parker, F.R.S., professor of biology in the University of Otago. Though Prof. Parker died on November 7, the news has only just reached this country; and it is given melancholy interest by the fact that the "Text-Book of Zoology," upon which Prof. Parker had for some time been engaged with Prof. Haswell, was only completed a few days before his death.

THE Council of the Chemical Society have recommended the following as Foreign Members to be balloted for at the next meeting, January 20:—Prof. Rensen, Baltimore, U.S.A.; Prof. Troost, Paris; Prof. Moissan, Paris; Prof. Raoult, Grenoble; Prof. Ostwald, Leipzig; Prof. Curtius, Bonn; Prof. Mensutkin, St. Petersburg; Prof. Markownikow, St. Petersburg; Prof. Arrhenius, Stockholm; Prof. Waage, Christiania; Prof. Franchimont, Leyden; Prof. van der Waals, Amsterdam; Prof. Spring, Liège; Prof. Körner, Milan.

WE regret to learn that Prof. Francesco Brioschi, president of the R. Accademia dei Lincei, died at Milan on December 13.

THE *Athenæum* announces that the mineralogist Dr. Albrecht Schrauf, author of several scientific works—among others of a "Lehrbuch der physikalischen Mineralogie," of a "Handbuch der Edelsteinkunde," and of an "Atlas der Krystallformen,"—has just died at Vienna in his sixtieth year. Dr. Schrauf was professor of mineralogy at the University of that place, and director of the Mineralogical Museum.

THE death is announced, at Cape Colony, of Prof. James Holm, late Professor of Physics at the South African College Cape Town. Prof. Holm (says the *Electrician*) was born in

Argyllshire in 1869, and had a brilliant career at Glasgow University, passing on to Edinburgh. Subsequently he spent several sessions in private research, under the special direction of Lord Kelvin, in the physical laboratory of the Glasgow University, and also in the electrical engineering workshops. At the completion of his scholarship he was appointed Demonstrator in Physics at the University College, Nottingham, where he remained until appointed to a professorship at the South African College in 1895.

MR. H. F. DONALDSON, Engineer-in-Chief of the London and India Docks, has been appointed Deputy Director-General of the Ordnance Factories.

THE sub-tropical Botanical Laboratory at Eustis, Florida, has been abandoned, and the work transferred to the Division of Vegetable Physiology and Pathology of the Department of Agriculture, Washington.

MR. A. C. HARMSWORTH has presented his Arctic ship *Windward* to Lieutenant Peary, and will have her overhauled and sent to America for his use in his coming Arctic expedition. This generous act is the latest incident in that series which has shown that England and America are bound by the strongest brotherly ties in their mutual interest in Arctic work.

PROF. OLIVER LODGE will commence his course of six lectures (adapted to a juvenile auditory) upon "The Principles of the Electric Telegraph," at the Royal Institution on Tuesday next, December 28. The subjects of the individual lectures are:—The production of an electric current; detection of an electric current; land telegraphy; ocean telegraphy; principles of wire and cable signalling; space telegraphy.

CHRISTMAS lectures for juveniles are increasing in favour. At University College, Liverpool, Prof. Herdman, F.R.S., will give a course of three lectures and a museum demonstration, on some of the more attractive parts of natural history, during the Christmas holidays. The announcement states that the course is for boys and girls, for whom the best places will be kept; adults will only be admitted on sufferance, should there be room for them.

THE following are among the papers announced for reading at the meetings of the Society of Arts after Christmas, in January and February:—"The Projection of Luminous Objects through Space," by Mr. Eric H. S. Bruce; "Fireproof Construction of Domestic Buildings," by Mr. Thomas Potter; "The Cinematograph," by M. Jules Fuerst.

THE will of the late Dr. George H. Horn (says *Science*) gives his valuable entomological collections, together with his entomological books and instruments and an endowment of 200 dols. per annum, to the American Entomological Society. From the residuary estate, after the death of his sister, the Entomological Society is to receive 5000 dols., the Philadelphia Academy of Natural Sciences 1000 dols., and the American Philosophical Society 500 dols.

AT the recent annual meeting of the Institution of Civil Engineers it was announced that, in respect of papers read during the Session 1896-97, the Council had made the following awards:—The Institution premium, value 10*l.*, to Mr. W. M. Mordey for his paper entitled "Dynamos"; the Paris Electrical Exhibition premium, value 5*l.*, to Mr. John Gavey for his paper on "The Telephone Trunk Line System in Great Britain"; the Fahie premium, value 5*l.*, to Mr. Benest for his paper on "Some Repairs to the South American Company's Cable off Cape Verde in 1893 and 1895." An extra premium of 5*l.* was awarded to Mr. A. P. Trotter for his paper on "The Disturbance of Submarine Cable Working by Electric Tram-