

dent sortant, Lord Kelvin, et le nouveau Président, Sir J. Lister, exprimer les liens d'estime, de reconnaissance et d'amitié qui les attachent aux savants français. Dans presque tous les discours qui ont été prononcés, des paroles émuës témoignaient de l'admiration que nos voisins professent pour notre regretté Pasteur.

"Je crois avoir été le fidèle interprète des sentiments qui nous aiment tous en assurant les membres de la Société Royale de notre estime et de notre sympathie et en rappelant combien nous avons été touchés de l'empressement avec lequel nos Confrères et nos Correspondants anglais sont venus célébrer les fêtes du Centenaire de l'Institut de France.

"Un autre motif encore m'avait valu l'honneur d'être invité par la Société Royale. Cette savante Compagnie entreprend un travail d'une haute importance pour la Science ; il s'agit de la création d'un grand Catalogue international, rassemblant tous les travaux publiés chaque année dans le monde entier sur toutes les branches de la Science.

"La plupart de nos Confrères connaissent déjà le magnifique Ouvrage dans lequel la Société Royale a rassemblé, sous le nom de chaque auteur, les titres des travaux publiés en tous pays depuis l'année 1800 jusqu'à nos jours. Chacun peut trouver, dans ce Recueil, la série de ses propres publications : Livres, Mémoires et jusqu'aux moindres Notes y sont classés par ordre chronologique, avec indication précise du titre et de la date de leur impression. Mais un tel Recueil, excellent lorsqu'il s'agit de retrouver les travaux successifs d'un auteur, se prête mal aux recherches bibliographiques sur un sujet donné. C'est pour combler cette lacune que la Société Royale veut entreprendre l'œuvre colossale dont je viens de parler.

"Déjà beaucoup d'entre nous ont été pressentis relativement à l'opportunité d'un tel travail, et c'est sur l'avis favorable de notre Compagnie que la Société Royale a résolu de faire adresser diplomatiquement à tous les Gouvernements la demande de désigner des délégués pour une Conférence internationale, destinée à rechercher les meilleurs moyens de réaliser cette publication. Jusqu'ici, les réunions du Comité du Catalogue de la Société Royale n'ont été que préparatoires ; il semble toutefois que, sur certains points, l'accord doive être unanime. Il faut, par exemple, que le titre de chaque travail en indique aussi explicitement que possible la nature et les conclusions ; il faut que les titres de certaines Notes se répètent en différents points du répertoire, lorsqu'elles se rattachent naturellement à plusieurs sections du Catalogue. Sur tous ces points, et sur bien d'autres encore, la Commission internationale devra statuer.

"L'importance de l'entreprise ne paraît pas discutable, le nombre toujours croissant des publications scientifiques rend aujourd'hui presque impossible la connaissance des travaux effectués sur un sujet donné ; les revendications de priorité occupent, dans les Ouvrages scientifiques, une place excessive, et beaucoup de savants dépendent en pure perte des mois et des années pour avoir ignoré des travaux antérieurs sur l'objet de leurs études.

"La question est du reste à l'ordre du jour ; plusieurs Sociétés savantes ont déjà des Catalogues très complets, d'autres sont moins bien partagées, mais peuvent déjà fournir de précieux éléments pour le travail d'ensemble. L'Amérique, la Belgique, la France et plusieurs autres nations ont dernièrement réalisé de grands progrès dans la manière de cataloguer les publications scientifiques. On peut donc espérer que, si l'action diplomatique est assez prompte, les délégués des différentes nations pourront se mettre à l'œuvre dès l'année prochaine et feront concentrer pour un travail commun toutes les forces éparses aujourd'hui.

"Dans l'esprit de la Société Royale, les dernières années de ce siècle seraient consacrées à introduire, dans le classement des documents scientifiques, tous les perfectionnements que l'expérience montrera nécessaires, afin que, dès l'an 1901, l'œuvre puisse se poursuivre régulièrement dans sa forme définitive.

"Tels sont les points qui ont été discutés dans la séance du Comité à laquelle j'ai eu l'honneur d'assister et que je me suis chargé de vous transmettre officieusement, en attendant que notre Compagnie en soit saisie d'une manière officielle."

THE HABITS OF THE CUCKOO.

IN an interesting and very valuable series of papers, published in the *Journal für Ornithologie*, and the *Ornith. Monatschrift*, Dr. E. Reh records his latest observations on the parasitic habits of the common

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cuckoo, which seem to entirely confirm what he has already given us in his larger work, "Altes und Neues aus dem Haushalte des Kuckucks."

In 1893, not more than two kilometres from Leipzig, no less than 70 nests were found containing cuckoo eggs ; of which, 58 (83 per cent.) were in nests of the Red-backed Shrike (*Lanius collurio*).

In this year it was observed that five females were missing, while at the same time eight females were detected as new to the locality. Four new foster-parents were also noted. An approximate balance is thus preserved. Fresh arrivals are recognised by means of their eggs ; for Dr. Reh finds that the colouration of the egg of every female is peculiar to itself, and constant. Each cuckoo returns every year to the same locality, and lays its eggs only in the nests of that particular species which it, or its ancestors, happen to have adopted for that purpose. Thus, not only can every egg in a district be identified, but the number laid by any given female can be determined with a tolerable degree of accuracy.

This yearly census of the cuckoo population seems to show that the young do not return to their birthplace to breed ; or that, if they return, they do not succeed in laying eggs, being driven away by the parent birds. The evidence for this view is based partly on the fact that the numbers remain approximately fixed for each locality, and partly on the assumption that the egg of the daughter cuckoo would be similar to, but not exactly like that of the parent. It has been found, however, that the eggs which are presumably new to a locality are of types totally distinct from the types of eggs laid by birds which, so to speak, belong to the neighbourhood.

Cuckoos would seem to be more prolific than is generally supposed, an egg being deposited on alternate days from the middle of May to the middle of July. Occasionally it happens that an egg is laid every day for a short period, but such an occurrence is rare. Sometimes two eggs are found in the same nest. Such cases can always be referred to particular birds which seem to have a tendency to colonise, as is the case with an American ally, *Crotophaga*.

It is related that on one occasion a male cuckoo was seen leaving a shrike's nest, noisily calling the while, and pursued by one of the infuriated owners—whether male or female could not be determined—until at length both were lost to view. The whole proceeding produced the impression that the male had purposely provoked the chase in order to give the female time to deposit its egg. When the shrike returned it was accompanied by its mate. On the previous day this nest had been found empty ; at 3 p.m. on the afternoon on which the chase occurred it contained one shrike's egg ; on a third inspection it was observed that a cuckoo's egg had been added.

As an additional piece of evidence in support of the contention that the cuckoo first deposits its egg on the ground and thence carries it to the selected nest, Dr. Reh quotes a case in which a cuckoo's egg was found smeared with red earth similar to that which occurred in the immediate vicinity of the nest from which this egg was taken.

As is well known, cuckoos' eggs found in the nests of some species of host differ widely one from another in colouration, while those from the nests of certain other species show a great similarity amongst themselves. Dr. Reh points out further that precisely the same features obtain among the species with which these eggs are found. Thus cuckoos' eggs from nests of the red-backed shrike show a wide dissimilarity in colouration, but not more so than do those of the shrikes themselves ; but, on the other hand, cuckoos' eggs from the nests of the wren exhibit great uniformity of colouration, just as do those of the host. As an explanation of these facts, it is suggested that this variability is due to the nature of the food upon

which the young birds are reared; in the case of the shrike the diet is of a mixed nature, but is fairly uniform in the case of the wren. To secure a foundation for this theory it is assumed that cuckoos, when about to deposit their eggs, intuitively select the nests of the species by which they themselves were reared. Thus it has come about that each particular species of host rears the young of a particular race of cuckoo, the eggs of which, like those of the host, exhibit great variability when the food during the nesting period is mixed, and great uniformity when the food is uniform.

These papers are based upon a great number of observations, which are exhaustively analysed and tabulated for the benefit of those who may be fond of statistics.

THE YORKSHIRE GYPSEY-SPRINGS.

TEN miles to westward of Bridlington Quay, in Yorkshire, is the much-neglected village of Wold Newton, situated, as the name indicates, among the Wolds. It is noted as being the place where the great Yorkshire aerolite—exhibited in the British Museum—fell on December 13, 1795, but more chiefly as being the birth-place of several phenomenal springs known as gypsies (the initial letter "g" pronounced hard). The gypsies of Yorkshire resemble the nailbournes of Kent.

They are variable and intermittent springs of very clear and cold water, and appear on the surface of the chalk valleys. So freely do the calcareous wolds absorb rain, that they will allow it to pass underground as far as the blue gault on which the chalk rests. Consequently, there is scarcely a permanent surface-stream in any of the numerous hollows that lacerate the chalk-hills. The gypsies simply make their appearance in winter, or early spring, or at other periods after heavy rains, when the chalk is saturated. They will sometimes flow for two or three months, then suddenly cease, leaving scarcely a mark upon their birthplaces. They have been known to have been quite inactive for three consecutive years. The emission is often so copious as to constitute a very considerable stream, filling a drain twelve feet wide and three feet deep. This is called the gypsey-race, and it conveys the flushed tide through the villages of Burton Fleming, Rudstone, Boynton, and finally disembogues it through Bridlington harbour into the sea.

The principal gypsey-head is in a field on the left side of the road between Wold Newton and Foxholes. Another gypsey rises to the light at Kilham, seven miles away. It happened fortunate that a native of Wold Newton and I caught the springs all open last Eastertide. We trod over a deal of spongy grass-land to pursue inquiries at the gypsey-head, and were rewarded by finding water issuing through the grass where the ground was not broken, and elsewhere rushing with considerable force over the surface to the height of our boot-tops. Every one of these little eruptions contributes to the race, and by it gets eventually to the sea.

At the western extremity of the great west to east valley of the Wolds—through which ran the old Bridlington and Malton high-road—there is a spring in a bank about a furlong or two east of Wharram-le-Street. This is the fountain-head of the Wold Beck—once known locally as "Lord Carlisle's River"—which travels for some nine miles past the doors of Duggleby, Kirby Grindalythe, West and East Lutton, Helpthorpe, and Weaverthorpe (a street of valley villages). This beck gradually sinks, and finally disappears below the surface before it reaches Butterwick, its sub-surface course being lengthened or shortened as wetness or drought prevails. Some say this beck next reappears at Rudstone; but, in any case, it no doubt feeds the gypsey-head near Wold Newton when the surrounding chalk is all well saturated with rain.

The race has been known dry for three consecutive years, while once or twice it has carried two or three feet of water in mid-August. On Christmas Day, about twenty years ago, it caused the village of Burton Fleming to be flooded, and a farmer I spoke to there said he went about wet-shod for a couple of months owing to this inundation. The gypsies originally shaped a channel for themselves. An attempt to divert this at Burton Fleming proved a failure, so a broad and deep drain of the dimensions already given was cut right away to the sea, and called the gypsey-race. When in flood, it looks like a pellucid trout-stream—twelve-pound trout have been killed on its banks; but there are no fish in it now, and the bed is for miles covered with long emeraldine grass, rippling like tangles of naiads' hair along the swift current. The grass hides the chalk and every pebble; there is no babbling sound; all Yorkshire besides has no stream purer.

Only a century or two ago there were still surviving, from the days of monasteries, many silly superstitions and traditions then attached to the mysterious conduct of the gypsies. In an old tour, said to be written by Defoe, we read that "whenever those gypsies—or, as some call them, vipsies—break out, there will certainly ensue famine or plague." In fact, as the overflowing of the Nile was to the ancients long an enigma, so was the rising of the gypsies, and may be yet so, even to some of the learned.

HARWOOD BRIERLEY.

NOTES.

PROF. SYLVESTER has been elected an Associate of the Brussels Academy of Sciences.

SIR WILLIAM H. FLOWER has been elected a Foreign Member of the Royal Swedish Academy of Sciences, in the place of the late Prof. Huxley.

PROF. RAY LANKESTER has been elected a Corresponding Member of the St. Petersburg Academy of Sciences.

PROF. G. F. FITZGERALD, F.R.S., will deliver the Helmholtz Memorial Lecture at an extra meeting of the Chemical Society, to be held on January 23, 1896.

THE Valz prize of the Paris Academy of Sciences has been awarded to Mr. W. F. Denning for his observations of shooting stars, discoveries of comets, and other astronomical work.

THE Albert Lévy prize, of the value of £2000 sterling, has, says the *British Medical Journal*, been awarded by the Academy of Medicine to Drs. Behring, of Berlin, and Roux, Sub-Director of the Pasteur Institute in Paris, for their discovery of the means of curing diphtheria.

ONE of the special features of the exhibition to be held at Berlin next year is to be an interesting and instructive Department of Horticulture. This portion of the exhibition is being carried out under the direction of Herr L. Spath, an acknowledged authority on horticulture.

A CORRESPONDENT writes that on December 12, at about 6.10 p.m., he was walking towards Brownhills Station near Walsall, when he heard a loud hissing sound, and, on looking round, saw a meteor falling, of a blue colour, and dropping sparks in its course. It was travelling S. 20° W. and apparently at an angle of about 20° with the horizon.

A DESCRIPTION of another meteor has come to us through the Meteorological Office. Writing from Oakford, Bampton, North Devon, Lieut. Wolfe Murray says:—"Last night [December 17], at about 6.30 p.m., I observed a very brilliant meteor. The