

of this family to congregate as larvae before turning to pupæ, which are usually found in numerous companies.—ED.]

RHINOCEROS HORNS.—Your correspondent Mr W. Blair, in the last number of the *Field*, has not correctly quoted the passage in Sir Samuel Baker's book. This is the correct passage: "I have seen a horn in Khartoum that was brought down the White Nile by one of the slave hunting companies which came from the distant west, in the latitude of Lake Chad, that must have belonged to a different species of rhinoceros, as it was quite 3ft. long, and immensely thick; no ketloa or black rhinoceros ever possessed such a horn. The longest one I have ever shot measured 23in., and I have never seen a larger one in the possession of natives," page 98, "Wild Beasts and their Ways." It will be seen that Sir Samuel Baker was referring to the black rhinoceros. The white rhinoceros has much longer horns. Fine specimens can be seen any day in the Natural History Museum (now at South Kensington), and as they have been in that collection more than a quarter of a century, it is curious that Mr Blair has overlooked them. One measures 57in. in length, and there are others of 43in., 42in., 40in., and 37in. In the Stanley Exhibition, held at the Victoria Gallery, Regent-street, during last summer, Mr Oswald showed a rhinoceros horn 45in. long, killed by himself. I have a horn here in my own collection 40½in. long, 22in. in circumference at base, weight 13lb. Mr Selous mentions in one of his books that he has killed a rhinoceros with a horn of 43in., and has seen a horn of 54in.—E. G. LODER (Leonardslee, Horsham).

CROWS ATTACKING BOOKS—St. J. S. in the *Field* of April 18.

ably got caught in the trap set for the crows. The only mode is to use the gun, and to lie in wait near the trees the crows usually perch upon; but this, as I found, is a most tedious process, and by no means always successful, owing to the crows' very nature and sharp sight.—D. PREY HARRIS.

EARLY NESTING OF THE COOT.—On April 10 I noticed a pair of coots, followed by their newly-hatched young ones, on the river Cam, where it widens out in front of Lord Braconrook's mansion. The four youngsters were in and out of the water, while the hen bird was diving vigorously, bringing up weed, which she shook into small pieces and distributed to them. Mr. Saunders, in his illustrated *Mammal of British Birds*, states that the young coots are ordinarily hatched towards the end of May, and remain in the nest three or four days before they follow their parents. Presuming that incubation lasts three weeks, and that six eggs were laid in this case, the first must have been deposited about March 12, when we had snow four or five feet deep in the drifts. Further up stream I could see another cove on her nest, a large floating heap of flags. On the 18th I saw the young ones at the same spot as before, but their number had become reduced to two. A large party of bramble finches was still with us on April 13, haunting the same beech trees which they had frequented since the beginning of November.—J. H. SAUNDERS (Saffron Walden).

INTELLIGENCE OF THE CROW.—The dropping of the small land tortoise from a great height in the air on to the rocks by the birds of prey, for the purpose of cracking the shell and obtaining access to the interior, is a fact which has been mentioned by several authors; but Mr. Howard Saunders, than whom no more accurate observer exists, gives a parallel instance regarding the crow, as observed by him at Vevey. Mr. Saunders states that, as he was walking on the shore of Lake Geneva, he observed a crow, which he saw to be carrying in its beak a small tortoise, and he saw the bird virtually take the place of our rook, eating similar food, and is equally at home in the fields, gardens, and about the houses in such towns as Lausanne and Vevey, and he is almost as intelligent as the Indian relative, the *Corvus splendens*. In his paper on the "Birds of Switzerland" in the last *Ibid.*, he says it displays great address in dropping walnuts from a height on to the flat copings of houses, in order to break them, and to obtain the shell and gain access to the contents, and he adds that the wall is rarely missed. The rook in Lausanne is migratory; single specimens, however, remain in the gardens attached to the dwellings. Mr. Saunders describes the amusing sight when scrag ends of meat or bones were tied to the end of thin branches, so that when trying to reach them the birds necessarily toppled over, when they would walk dach on the wing at the foot, which they would pick up as they went, and it was the jubilation when the spoil was triumphantly carried off.—T.

ANNUAL RETURN OF SWALLOWS TO FORMER HAUNTS.—I am the happy possessor of a family of swallows that yearly find sanctuary and bring up their young at the far end of a long passage with a sharp corner leading to my coal cellar. Here they annually hatch off their two broods, and last year the first lot flew on June 22. The old birds began to get about the 15th, and the first egg was laid on 30th idem. I was naturally on the look-out for my friends to return, and as in these parts the swallows always linger for the first few days of their arrival by the river, it was not till the 15th that I saw any flying over my house. In less than an hour after I saw the first swallow over the house, I heard the familiar and welcome clatter as the pair dashed past my study window down the dark passage to inspect the ruins of their last year's abode. Who can tell where they have been during their five months' absence? Who can divine the wondrous instinct that brings this pair of visitors year by year, perhaps hundreds of miles, to the secluded ledge in the long dark passage? Who can do more than conjecture that the instinct that reared their families so happily here last year? No strange birds could have found this secluded spot so rapidly, and when one mused and ponders over this fact, one is forced to the conclusion that there must be some link—some instinct, call it what you will—that has bound this pair together for better, for worse; that has kept them together during the long winter months, and that made them so merry with me, and so glad, when they were in my nursery, and knew and felt that they were once more at home.—SHAHIN (Charminster).

CAKCLING OF HENS.

As the correspondence on this topic appears to have ended, I write to thank Mr. Hudson for his very apposite and interesting reply to my questions. On the other hand, I have to thank Mr. Darwin's "Tegetmaster" for that the "discussion" has been either "trivial" or "useless," for it has elicited facts which were unknown to the leading ornithologists whom I consulted before writing to the *Field*, and, although he makes merry with me for having said that in the cakcling of hens we appeared to have an instinct which is "imperfect," or even injurious, he is evidently not aware that, in saying so, I drew my conclusions from the fact that the "not complimentary contrast" which he draws between Mr. Darwin's methods and mine in regard to this particular case happens to be particularly unfortunate; and, while I cannot regret that his want of acquaintance with Darwin's opinion has induced him to be "greatly amused" at my seeking more information on the subject, I may be allowed to observe that "the distinguished honour of working with Darwin" is not a great recommendation. On the contrary, Darwin's constant habit of soliciting information from all quarters brought him into personal relations with so many naturalists of all kinds, that not a few of them have enjoyed even better opportunities of observing his methods than were afforded to his present spokesman. GEORGE J. ROMANES, Christ Church, Oxford, April 18.

ZOOLOGICAL SOCIETY.

At the meeting of this society held on Tuesday last, Professor W. H. Flower in the chair, a communication was read from Lieutenant-Colonel Sir Oliver St. John, containing notes on the habits of the guinea pig in breeding during domestication. Mr. R. E. Holding exhibited and made some remarks on some remarkable forms of man's domesticated animals, Highland and other breeds. Mr. E. T. Newton read a paper on the structure and affinities of *Trochosternus curvirostris*, basing his remarks principally on the skull of the animal, and on the skull of the *Peromyscus*. Mr. A. Savin from the forest-beds of East Buxton, near Cromer. Mr. H. J. Elwes read the first part of a memoir on the butterflies collected by Mr. W. Doherty in the Neve Hills, Assam, the Kaven Hills in Lower Burma, and in the State of Perak. Messrs. Boddard and Murie exhibited and made remarks on a canorous nodules taken from the stomach of an African rhinoceros (*Rhinoceros bicornis*), which had recently died, after living twenty-two years in the society's gardens. Mr. J. J. Lister gave an account of the birds of the Phoenix Islands, Pacific Ocean, as collected and observed during a visit to this group made in H.M.S. *Egeria* in 1889. The next meeting of the society will be held on May 5, when the following communications will be made: Mr. Schlater, on the fauna of British Central Africa; Col. Boddome, descriptions of new land-shells from the Indian region; and the Hon. W. W. Rothschild, description of a new species of the genus *Carpophaga*. The following communication has been received: Dr. O. F. von Moellendorf, on the extra-uterine mollicous of Perak. Communications intended for the scientific meetings of the Zoological Society of London should be addressed to Mr. P. L. Sclater, secretary, 5, Hanover-square, London, W.

ADDRESSES TO THE MANAGER, BEECH'S PARK, FROM APRIL 13 TO 19.

Date.	Name.	Country.	How obtained.	Where lodged in the Gardens.
April 13	9 <i>Sturnistes</i> (Suricate to <i>strutellata</i>)	S. Africa	Presented by Mr. J. W. Munn	Small Cats House
14	5 <i>Azara's</i> (Opossums (<i>Didelphys azara</i>) & 2 <i>L. f. azara</i>)	La Plata	Presented by Mr. E. C. Hayes	Small Cats House
15	1 <i>S. f. azara</i> (Simia noris) & 2	Sarawak, Borneo	Presented by Mr. C. E. Bason	Small Cats House
16	1 Lion (Felis) & 2	Bred in Holland	Purchased	Lions House
16	1 Grey Parrot (<i>Ptilinopus erithacus</i>)	Bred in Africa	Deposited	Parrot House
17	1 <i>Nyctale</i> (<i>Boscops transvaalensis</i>)	Bred in France	Purchased	Antelope House

♂ Males. ♀ Females. * New to Collection.

[Advertisement.]—The Rev. C. H. Spurgeon volunteers the following statement, with the desire that his words may be published with a view to assist in the popularizing of Saccharin: "It must be a great thing for persons to whom sugar is injurious to be able to have their food sweetened by another and equally desirable substance. Saccharin answers all the desirable purposes of a sugar to a gouty person, and yet it is not sugar, and does not go to form surplus nutriment. I regard the discovery of Saccharin as a great blessing so far as my own health is concerned. I use only a few grains, or thousands." Of all chemists and grocers. Wholesale: Wilson, Salamons, and Co., Limited, 15, Billiter-street, London, E.C.

THE FARM.

SIDE LIGHTS THROWN BY THE CENSUS.

ALTHOUGH the main returns, taken upon April 5, are still withheld from the public, and although very possibly these returns may never be so grouped as to illustrate the working-upon the population—of the various methods of farming, which are established in this country, enough has come to our knowledge to make one see that, although the agricultural population, as a whole, may not show so great a deficiency, there will be a falling off of from 10 to 20 per cent. in all those arable counties in which the four-course system of cultivation still prevails. In these there has been by far the greatest distress felt during the depression; and from these there will be found to have been the heaviest "exodus" of the population. In districts where dairying has either always prevailed or has been recently introduced, or in districts where *la petite culture* always was, or has become a feature—the diminution in the number of residents is far less. But in the parishes, whether of light or heavy land, in which the tenantry or owner have continued to pursue what has been held all through this century—to the orthodox course of cropping, there will be found to have been empty cottages, and a greatly reduced number of inhabitants. In one case known to us, there are nearly 30 per cent. fewer people at work upon the land in 1891 than there were in 1881.

If, as we believe will be found to be the case, there has been a special reduction in the numbers of the agricultural labourers where the occupiers of the land are tied to "farm four-courses," it will form a new indictment against that method. It has been already impugned as being one cause why English barley is less in demand than it was; and also as the chief reason why (involving the necessity for periodical removals of a large part of animals kept to consume roots in winter) there is now so much more complaint about contagious diseases in farm stock than used to be heard fifty years ago. The indirect and somewhat consequent loss of habits, and practice, are of more significance than are those which are more immediate and at once recognised as the natural fruit. It will undoubtedly make compulsory four-course farming a fit subject for legislative interference, if it can be shown to be an agent in divorcing the country population from the land. We believe that the produce of land "farmed four-courses" has not materially altered (except so far as individual males) since the close of the last century. As much corn and meat per 100 acres was produced by the average tenant fifty years ago as the average tenant produces now; it is worth, of course, now little, if any, more than half of what it used to be; but an alteration which involves that the amount available for rent and labour is greatly reduced. Of the rent we do not propose to speak. Of the labour we may say that circumstances outside the control of the farmer keep up the current rate of wages. It is plain, then, that the occupier—who, to meet lowered prices of produce, has to lower his labour bill as one cost of production—can only do so by employing a smaller number of hands.

And together with this necessity comes a second; the cheaper class of day-wage-earners is shortened in another way. Schools keep away boys who would otherwise be seeking their living in the fields, and a prejudice has been created against women working in the fields throughout the whole of the south of England. We believe that in the northern counties and in Scotland there are still found women-workers in the fields; but in the corn-growing arable counties of the eastern and midland sections of England there are none. The workers on a farm in them are all full-blooded males. Now as the demand for labour is less than it was, and the individual labourers each receive a higher wage per day, or per week, it need not be wondered at that the population, living in such counties, and dependent upon agricultural wages for a maintenance, must have been greatly shortened. And this the census will show generally to be the case; but, unless some agricultural association shall take up the question, and work out the variation in parishes where the four-course is still imperative, and that in other parishes where there is greater freedom in cropping, we do not suppose that the full lessener of the census in this respect will ever be attainable. It will remain one of many which lie around us ready to be gathered, but which are out of ordinary reach for want of combined effort sufficiently to register facts.

Still, we do not doubt that the census will throw a light upon the effect of various systems of land management upon population. As a rule, we believe it will be found that the smallest agricultural parishes—i.e., those under 400 inhabitants—will show the largest proportionate decrease; those between 400 and 600 the next largest; and those (which will be large agricultural parishes) which exceed 800 population will show the least. All purely agricultural parishes (except where farm-gardening has been developed) will show a reduction in numbers, as we fancy, since 1881; but the smaller sized ones will have suffered most. Population helps to find work for population; but where the population is thin upon the land because the land ceases to give work, not only the class of land workers but all those who cater for its wants will fall away, and seek a home elsewhere, in the towns and beyond the sea.

Another point—which might be enlightened by the census, although we do not know that it will—is the extent to which what used to be called "close parishes" have become repopulated. There were, at the time of the census in 1861, several parishes known to us in which (cottages having been pulled down to get rid of hamper-norm elements) there were not actually any cottages left, in each village, and yet enough people to do the work of husbandry. Men trudged in every morning to their work, beginning the day's labour by a walk of a mile or two, and supplementing it to the same amount when the hour for leaving off arrived. This undeniable blot upon English methods has to a very great extent been removed by the building of new cottages, which, upon the larger estates and villages—i.e., those which contain the "close parishes"—have been a very heavy charge on the diminished income. The census, taken parish by parish, will tell to those who know the district to what extent repopulation has gone. These parishes will be exceptions to the general rule we have ventured to formulate, i.e., that the agricultural parishes with the smallest population will be found to have suffered the largest depletion. But it will be impossible to follow out all the ways in which the census will throw side lights upon farming. The census will tell the most to those who already have most local knowledge. It ought, however, to make clear what we believe is quite established, that there is no longer, in the smaller towns, any large number of farm labourers who go out of the town every morning to their work, and become part of the urban population in the evening after dusk.

NOTES OF THE MONTH.

TO JUDGE BY APPEARANCES, we shall be little nearer the green crops of spring on the first of May than we were on the first of April. It is certainly a stroke of ill fortune, and Job's fortitude and patience to endure, that a winter—which, throughout the country, swept away the roots in the fields, and severely touched those in store—should be followed by a late spring. Many weeks ago I was asked to visit a Wiltshire sheep farm, which it was my lot to be in its glory at the middle of April, when the water meadows would be full of grass. I am now warned that, at present, there is no grass in the meadows, and it is hoped there may be some in about a month. An Essex correspondent writes that farmers are buying 29s. per ton for mangold; and, in the North, 40s. per ton have been paid for turnips. How true is the old saying, that "Winter has a wide mouth." Having opened its hungry jaws when the frost set in during last November, they are found, at the end of April, still to be open and ravenous; in consequence of the protracted drought and long-continued cold weather.

It is not surprising that the reports of the lambing season have become less favourable. The crop of lambs was at first reported to be good, but the abortions in the later lambing districts, and the losses from snowstorms and exposure, reduced the average; and the present opinion is that single lambs, this season, are more desirable than doubles, owing to the scarcity of milk, which has been occasioned by the want of excellent food. It is feared that the lambs of the present season will not prove quite so good as usual. Lambs, no doubt, appreciate succulent food; and this season they have been very generally deprived of it. But one would hardly think they could take much harm, provided they were well fed with substitutes, and their mothers yielding plenty of milk. A correspondent writes that a very famous one, tells me that, although the winter has been trying, his lambs have done "marvellously well." There are 133 lambs in a flock of 100 ewes, and very few have died, while one ewe was lost in lambing in a flock of 500 or 400. Spring feed is now, says my friend, very backward, the ryegrass still close to the ground. The ewes and lambs are doing very well, penned over the bare paddocks, with mangold mixed with hay and straw chaff. Perhaps they are saved by the mangold. A very different state of things is reported of Romney Marsh, where, according to a breeder of Kent sheep, writing to the *British Observer*, a small amount of shelter and food is provided, and the losses of sheep and lambs have been great. Many were drowned in the ditches, and smothered or trampled down in the enormous snow-drifts, ranging from 15 to 10 ft. high, and other sorts of lambs below par in Romney Marsh, for the ewes are poor, and the grass, bleached by frost, is only just becoming green again. The farmers in this land of Goshen do not seem to have met the emergency promptly.

All kinds of store stock have fallen considerably in price, owing to the numbers thrown on the market. Good horses of all kinds, on the contrary, are selling unusually well, at a very considerable advance upon last year's prices.

The perfect tith which mangolds require was readily obtained this season, and the seed is being sown under favourable conditions. The soil is in capital order, and the crops are coming up as fast as soon as they get the chance, which, however, can hardly happen so long as the wind blows cold from the north and east, and the sun refuses to perform his office, and the clouds to yield genial showers. It may interest growers of potatoes to know that the Royal Dublin Society has recommended the planting of such varieties as Early Rose, Champion, Bruce, Magnum Bonum, and Imperator, as being the best for the present season. General, and other sorts of potatoes were planted side by side, a very useful lesson would be read. One would say of some of them, however, that they are worn out in the south of England. Although the Bruce yields well and finds favour in Scotland, it does not resemble the best of the Scotch market, where potatoes with smooth skins are preferred. Magnum Bonum is still one of the best and most productive potatoes. Gloomsider is much approved for even-sized tubers, free of disease. Stourbridge Giant has stood at the tests of which potatoes are subject; it shines on the show bench, and also as a farmer's potato in the field. Satisfaction is a great crop, of good shape, and of fine quality. It is a pity that it is not a very distinct late variety of red clover, known as "single cut," and more perennial than the other.

As the period of sowing clover seeds it may be well to mention the large quantity of weeds and injurious parasites, like dodder, which are sown on farms with clover seeds. I have shot partridges in thousands of the seed of the clover seed, where the plant covered the ground to the exclusion of all weeds. English seed is much the cleanest, and as much of the foreign seed is not only foul, but produces crops suited only for warmer climates, it is desirable to buy this kind of seed of the grower, or to get it from some reliable seedsmen. The Royal Distinct late variety of red clover, known as "single cut," and more perennial than the other.

Farm work of all sorts is now well in hand. With regard to labourers, there are complaints, in the well-paid districts of Lancashire and Cheshire, that good all round men are scarce. First class cowmen are eagerly sought for, and are not always to be found. The modern farm labourer has heard the story of that very lucky youth, Dick Whittington, who became Lord Mayor of London, and he follows his example in trudging to town to seek his fortune. He often finds himself worse off for the move; as unskilled labour is not paid either in town or country. The labour agitators who are now stamping some of the ill-paid districts should assist in solving the problem why men are paid twice as much in the north as in the south, and it is true that the cost of labour is more in the north than in all districts, then it would seem that the northern labourers must exhibit superior efficiency to the southern. None are more interested in having this question well ventilated than the labourers, who may have a right to be discontent in the present position of their wages, if they ought to understand as well as their employers the altered management which the times have rendered necessary. Last summer I had the pleasure of reporting in the *Field* several representations in regard to a cattle-rearing district in Cumberland where farming is exceedingly prosperous and wages highly paid. One of the farmers I visited has since purchased his farm on the profits of stock. With regard to his training as in the north, and the method of acquiring it, his household, like that of the other farmers, includes four or five young men, besides his own industrious family, who are engaged in learning, in the best possible school, the special industry of their locality; it was easy to see by what system the labourers of Cumberland are turned into efficient workmen. Let me contrast this system with that of an ill-paid corn-growing district. Later in the year I visited a very clever farmer who is struggling against the times in one of the eastern counties. He had reduced his breadth of corn, and had increased, to some extent, his flocks and herds, but he found that the business of cattle rearing was seriously thwarted by the inefficiency of his men in that department, and by their carelessness and inattention. The farming of the country had broken down, and his attempt to introduce a new system was being strangled by the very men who would reap the benefit of it. In the north skilled labour (of all elements) is scarce, and it is not surprising if we find the labourers at the present time, and in the future, to be "disaffected" and "discontented" with life, especially when that life yields them but poor pay. We shall see how the labour agitators deal with these matters. They are not likely to be very complimentary to farmers. They will probably say that the fault lies with the wages, though it is as great as an unprofitable industry can afford to pay for only poor performance. Candid discussion is not in their line. They will abuse the wages, but they will not pay them. They will stir up a great deal of discontent, and if the state of the labour market assists their agitation, they will encourage the migration which has already depopulated the rural districts. It is useless to blame these parties, until they be removed or deepened. It is evident that all parties should alike endeavor to re-establish a profitable system of farming, a better training of young labourers, and better relations between the different classes in agriculture. The movement in favour of small farming can, in some measure, be explained by the light of what has just been written. That wheat should have already risen to an average price of 50s. per qr., with a prospect of further advance, and that it rejoices the hearts of the corn farmers; to whom I have referred as