

to his mate he bonds his body into a horizontal position, and, walking towards her, suddenly throws out these brilliant tufts like miniature wings, their brilliant crimson colouring contrasting conspicuously with the blackness of the rest of the body.

Mandarin and Carolina Ducks.

"Of all the 'fancy' waterfowl which are known to aviculturists none will ever be so popular as these two extravagantly dressed species. There is probably no bird of equal size that attracts the public more than a drake mandarin when in full colour and first-rate condition, with its richly coloured crest and upstanding wing fans. It is a truly extraordinary bird, and looks Chinese every inch of it. The American Carolina drake, although not possessing the remarkable fans of the mandarin, is, if anything, even richer in colour than its congener. Just at present there is a flock of just about 100 mandarins and Carolinas in the Gardens prior to their shipment to America, where these birds appear to be as popular as they are in Europe, and they present a spectacle well worth seeing. One can well understand taking the Chinese mandarin duck to the United States, but the shipment of the Carolina or "wood duck" back to its native habitat savours somewhat of carting coals to Newcastle. But the fact is the bird is becoming rare in a wild state, and in captivity is commoner here than there. Hence it is worth while taking over for a change of blood."

R. I. POCOCK.

WINTER HAUNTS OF RAPTORIAL BIRDS.

ALTHOUGH THE LARGER BIRDS OF PREY are visibly diminishing in England, several species may be observed at this season of the year by any pedestrian sturdy enough to venture far over the lonely land that stretches from the north of Lancashire, through Westmorland and Cumberland, as far as the Cheviot Hills. It is not very good going in winter when the snow sometimes lies a foot or more deep on the passes. One may walk for miles and only meet a shepherd bringing his flock down to the shelter of the lower ground. Nor is it always easy to find accommodation, for, even in the Lake District with its numerous hotels, there are more closed doors and empty rooms than one would expect to find; and there is no great pleasure in finding oneself the sole visitor in a house built to receive a couple of hundred. It is not even possible to venture far up the hills to explore the jutting crags that reveal now and again through a strong glass evidences of occasional bird life, but one may see a few ravens and buzzards that are left to the hills, and on rare occasions watch the splendid flight of the peregrine falcon, in many aspects the noblest of our raptorial birds.

In Cumberland recently I watched for some time the slow, weary flight of two ravens over the snow caps and just under the clouds, though it was not easy to guess what they hoped to find in their close scrutiny of that high ground. At this season, when grouse and black game are enjoying protection and there is little shooting, ravens must go hungry for days together, their greatest hope being that they may find a sheep that has slipped on its back and is consequently unable to rise. This condition will serve them for an attack upon the poor beast's eyes, and many a farmer on the wild hills between Helvellyn and the Cheviots knows what it is to bring blinded sheep down to the low ground, where, strange though it may seem, they recover and grow fat. If left on the hills they fall an easy prey to mountain fox and raven. One of the most attractive of the flight that the ravens were a pair of buzzards I watched in the same country. They hung high and well-nigh motionless, so high, indeed, that it would have seemed almost impossible for them to watch the hillside that was the special object of their regard, but it was not long before they sailed down to within a few feet of the hill and proceeded to skim over the surface, doubtless in pursuit of a rabbit. In their own country these birds, so beautiful to look upon and so little harmful to man, still linger, and might with little encouragement descend to lower lying lands. But when they drive out their young year by year, the latter inexperienced birds seek the low lands, and are shot on sight.

It is less often seen among the wild mountain dwellers is the peregrine, so swift in flight, so remorseless in pursuit. Sometimes his presence is declared only by the passing of some unsuspecting bird within view of the crag on which the peregrine is resting invisible, his protective colouring being so admirably adapted to its purpose. But so soon as he is launched in pursuit there is no shadow of hope for the quarry pursued. Ravens and peregrines will sometimes nest within a few yards of one another on some bleak mountain crag that defies even the man who takes a pleasure in risking his life at the far end of a rope suspended over the top of the hills. Each bird chooses the least accessible place, and should these sites be close to one another violent quarrelling will certainly ensue, although each combatant is well aware of the other's strength. Ravens will drive peregrines away if they have been well established before the arrival of the latter, while, on the other hand, if the peregrines have had time to settle down they will hold their own against the ravens, and the condition of armed neutrality leads to many a strange scene. Fortunate is the man who witnesses one.

There is one tragedy of the hillside of which the raptorial birds are often the only witnesses, and of which the raven alone takes the fullest advantage. It comes in the early spring when some narrow ledge, sheltered from the winds and covered with fresh grass, tempts one of the mountain sheep to jump down on to it. The unfortunate animal, having eaten all the grass, is unable to return to safety for it lacks the courage to take the necessary spring. So it remains until, not only the grass, but the roots themselves have gone to feed it, and it lingers on to starve, until its feet can sustain it no longer. Then it comes crashing down on to the rocks beneath to the delight of the hungry ravens that have been circling round it for days ready to wound, yet afraid to strike.

S. L. B.

UNICORN SHEEP.

Sir,—As I am responsible for the suggestion that the unicorn sheep is an artificial product, I should like to ask Mr Pocock how a sheep which has two distinct cores to the horn and two sheaths can be called a unicorn? At the time that I first expressed an opinion on the subject, now some years ago, I was given to understand by men of science, who have since changed their minds, that they expected the animal would be found to have a single core. My suggestion to Mr Lydekker was that either the Nepalese have bred a race of sheep by selection with the horns growing close together, or that they have a bred with the horns naturally close. A little manipulation of the growing horn would then probably produce the so-called "unicorn." The experiments in breeding unicorn sheep at Woburn have been conducted on the principle of crossing the unicorn ram with ewes which have a stronger strain of the unicorn in each generation. The ram died too soon to allow of the results being considered complete. I am, Sir, very truly yours,
M. BEDFORD.

THE MOBILITY OF RHINOCEROS HORNS.

Sir,—In reference to Mr Pocock's interesting observation on this subject, I would remark that the belief in the mobility of the horns of rhinoceroses is a very ancient one. Unfortunately, I cannot give an original reference, but the following quotation from page 153 of James Greenwood's *Wild Sports of the World*, London, 1862, will serve the purpose:

Concerning the horns of the rhinoceros, there exist many curious superstitions, one being that when the animal is undisturbed by man and at peace with his fellows, its foremost horn is plastic as the trunk of the elephant, and put to the same purposes; but that when enraged the animal, in order to sustain its horns as a weapon of war, and relaxes not till the root of the horn is firmly attached to the bone. The root of the horn, without foundation, for, as has already been stated, the horn is merely seated on the top of the nose, having for its base a peculiar knob of bone. The root of the horn may be planted in a bed of muscle, which, when the animal is at rest, may so relax as to admit of the weapon swaying slightly, giving it, to the eyes of the furtively watching savage, an elastic appearance.

Although Greenwood was incorrect in his suggestion that the horn rests on a base of muscle, he has the merit of being the first to point out what Mr Pocock's observations show to be the true explanation of the old story. Possibly the original legend may be found in Popsell's *Four-footed Beasts*, to which I have at the time of writing no means of referring.

Another passage bearing on the subject occurs in Burchell's *Travels in the Interior of Southern Africa*, 1822-24 (vol. ii., p. 76):

If the horn of the rhinoceros grows from the skin only, in the same manner as the hair—a circumstance which entirely contradicts the assertion of its sometimes being seen loose, although by no means so

loose as some writers have supposed. Nor is at all extraordinary that the rhinoceros should possess the power of moving it to a certain degree, since the hog, to which, in the natural arrangement, it so closely approaches, has a much greater power of moving its bristles, which if concreted would form a horn of the same nature.

R. L.

NOTES AND QUERIES ON NATURAL HISTORY.

EARLY BREEDING OF WILD DUCK.—I found the nest of pure-bred wild ducks (*Anas boschas*) here, containing ten eggs, on Jan. 22. Unfortunately, both duck and drake were shot before the nest was discovered.—WILLIAM E. DE WINTON (Burwash, Sussex).

LARGE WASPS' NEST.—I send a photograph of a wonderful wasps' nest which was taken last summer at Warwick. It was discovered under an old thatched roof in Mill-street, and, after the destruction of the inmates, was cut carefully away from its attachment, and photographed forthwith. The dimensions were as follows: Circumference, 5ft.; diameter, 2 1/2 in.; depth, 14 in. It contained fifteen tiers of cells.—ARTHUR W. TEW.

LITTLE AUK AT MELROSE.—The bird sent with this was found here alive on Jan. 20, but died the next day. I shall be glad if you will say what it is, and whether it is a rare bird to have been found so far inland—forty miles from the sea.—T. J. S. ROBERTS (Drygrange, Melrose). [The bird received is a little auk, not uncommon as a winter visitor to our shores, and some times found a long way inland after stormy weather at sea.—Ed.]

LOCAL MOVEMENTS OF BIRDS.—With reference to Mr P. Fountain's notes in the *Field* for Jan. 6 (p. 49) under this heading, it would be interesting to know how the house martins mentioned were marked, and how they were recognised on their return in the following year. I hope that Mr Fountain will provide this information as the observations are of great interest. It is not quite clear whether all the birds mentioned as having been marked in the years 1907-09 were house martins, or whether any of them were swallows.—H. F. WINTERBY.

EARLY FOX CUBS.—While shooting at Aldermaston Court on Saturday last, Jan. 20, a litter of eight cubs, apparently about three days old, was secured. This included a large litter as well as a very early one—CHARLES TURNER, Major (Newbury). [In the *Field* of April 30, 1910, we reported the discovery by a German forester at Heidal of a litter of ten fox cubs. As they were a very level lot he concluded that they belonged to one litter. In Dr Furst's *Forst und Jagd Lexicon* mention is made of a litter of eight, but four or five is the usual number.—Ed.]

SCARCITY OF SQUIRRELS IN WEST NORFOLK.—I should like to know if readers in other parts of England have noticed the scarcity—even total absence—of squirrels. In West Norfolk, where we generally see them in the grounds and woods, we had none all last summer, and neighbours whose attention has been called to the fact have invariably replied that "they had not seen any this year." I have heard it suggested that the scarcity of nuts and acorns during the winter of 1910-11 may have resulted in starvation to the squirrels. Perhaps your readers can throw some light on the subject.—C. H. C. [Another correspondent has reported a scarcity of squirrels last year in Nottinghamshire.—Ed.]

RHINOCEROS HORN.—With reference to the remarkable rhinoceros horn figured in your issue of Jan. 20, we may say that we have a fine specimen which we take to be a horn of *Rhinoceros simus* from the description given—length 4 1/2 in., circumference at base 2 1/2 in., weight 1 1/2 lb. This horn was sent to us many years ago by a correspondent in Pietermaritzburg, but where the animal was shot we have no means of knowing. We have also a walking-stick made from a single piece of rhinoceros horn which is 4 1/2 in. long, and is, we believe, unique in having no black colour in it from end to end, whereas every other horn that we have seen is black for the greater part of its length.—SWAINE AND ADENEY (185, Piccadilly, W.).

DOG CATCHING MOLE.—Mr C. J. Cawood's letter on this subject reminds me of a white bull terrier bitch I possessed some years ago in Suffolk, where moles are, or were, far too abundant. When she came near a mole heap she would always walk delicately, and if the mole's hapened to be turning up more earth would stand with her nose down and one paw uplifted. The instant the mole began pushing up earth, down went paw and nose together, and in most cases up came the mole. Having killed the mole with one nip, she always rolled on it. Mice she would catch and eat at once. Rats she gripped by the shoulder and dropped them dead. Rabbits in a trap or snare she would sniff at and sit by until I came up and took out the rabbit.—L. C. CRABCH HAWARD (Miltown, Co. Kerry). [We have received other letters on this subject for which we are unable to find room, and which confirm the statements already published.—Ed.]

THE EAR OF THE AFRICAN ELEPHANT.—I have had several arguments about the direction of the inner fold of the ear of the African elephant mounted in the Natural History Museum. I hold that this fold should be directed forward and not backwards. I have been told that in this particular specimen it was impossible that the fold could have been directed forward in the living animal. My reply to this was then it is an abnormality. I know of no mammal with this lobe directed outwardly or backwards. I remember one Abyssinian elephant in the Zoological Gardens which had this fold remarkably developed, and it was Currier the mole with one nip, she always rolled on it. Mice she would catch and eat at once. Rats she gripped by the shoulder and dropped them dead. Rabbits in a trap or snare she would sniff at and sit by until I came up and took out the rabbit.—L. C. CRABCH HAWARD (Miltown, Co. Kerry). [We have received other letters on this subject for which we are unable to find room, and which confirm the statements already published.—Ed.]

German Emigrants for Australia.—A party of between 250 and 300 German emigrants—fifty-five families in all—will shortly arrive in Queensland, and will settle on farms of from 160 to 320 acres at Mundowan and Lochaber, in the Gayndah district. They are sailing under the guidance of Pastor Niemeyer, who has already been instrumental in taking out a large number of Germans to Queensland. In many parts of Australia there are flourishing colonies of German settlers—notably along the river Murray. They have proved themselves agricultural workers of the very best order, reports the High Commissioner for the Commonwealth, and none could be more loyal to their adopted land.

Wheat Yield of New South Wales.—Although present estimates indicate that there will be a considerable over-shipment in the Australian wheat yield this season as compared with last, figures received by the Agent-General for New South Wales show that the contribution of the wheat-growing province of Temora in that State will be heavier than last season's. In the Mimosa, Stockinbingal, and Springdale districts of the province as much as 40 bushels per acre is being bagged on fallowed land. At Beckom one farmer is harvesting 154 bags (40 bushels) of fine quality wheat. In the Barellan district there are some exceedingly fine crops, going as high as about 36 bushels per acre, and the early sown wheat at Naraburra is returning 33 bushels per acre.

White Labour in the Tropics.—The Royal Commission of Inquiry into the Australian Sugar Industry, which is now touring Queensland, is taking some interesting evidence concerning not only the stability of the industry itself, but also the conditions of life generally of workers in the tropical districts where the cane is grown. Sugar growers, when asked as to the health of themselves and their families, all said that the prevalent impression of North Queensland was a false one. There was scarcely any dissent from the conclusion that it is possible to rear a family in the tropics provided due care is taken, and that women and young children can live there as well as men. According to a statement issued by the High Commissioner for the Commonwealth in London, the Commission is finding that the best evidence for the industry is the general demand for more land and for more mills. The sugar growers seemed convinced of the possibilities of a permanent white settlement, especially if the Queensland Government build railways to the table lands, where workmen's blocks are already available.