THE

HOMINGOR CARRIER PIGEON

(LE PIGEON VOYAGEUR)

ITS HISTORY, GENERAL MANAGEMENT, AND METHOD OF TRAINING.

BY

W. B. TEGETMEIER, F.Z.S.

Author of the "Poultry Book," "Pigeons;" Editor of the Poultry Department of the "Field," etc.; Honorary Secretary of the Grand Anglo-Belgian Concours, Crystal Palace, 1871.



LONDON:
GEORGE ROUTLEDGE & SONS,
THE BROADWAY, LUDGATE.
NEW YORK: 416, BROOME STREET.

ROUTLEDGE'S

CHEAP COOKERY BOOKS.

FRANCATELLI'S COOKERY. 6d.
SOYER'S COOKERY FOR THE PEOPLE. Is.
MRS. RUNDELL'S DOMESTIC COOKERY. Is.
MRS. RUNDELL'S DOMESTIC COOKERY. Is. 6d. cloth.
THE BRITISH COOKERY BOOK. 3s. 6d.

See also Household Manuals.

ROUTLEDGE'S HOUSEHOLD MANUALS.

Including the "HUNDRED WAYS" Cookery Books.

Price 6d. each. (Postage 1d.)

The Cook's Own Book.
The Lady's Letter Writer.
The Gentleman's Letter Writer.
The Village Museum.
How to Cook Apples.
How to Cook Rabbits.
Every-Day Blunders in Speaking.
How to Cook Potatees.
How to Cook Fish.
The Lovers' Letter Writer.
Cholera. Dr. Lankester.
How to Make Soups.
Good Food. Dr. Lankester.

Dinners and Housekeeping.
How to Preserve Fruit.
Routledge's Recipe Book,
Ready Remedies for Common
Complaints.
How to Dress Salad.
How to Cook Game.
How to Make Cakes.
The Lady Housekeeper's Poultry
Yard.
How to Cook Vegetables.
How to Make Pickles.
The Invalid's 'Cook.
How to Stew, Hash, and Curry
Cold Meat.
How to Make Puddings.

ROUTLEDGE'S SIXPENNY HANDBOOKS.

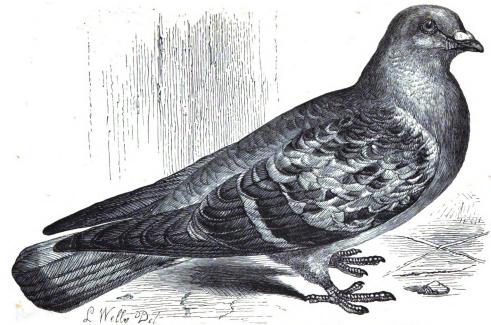
With Illustrations and Illustrated Boarded Covers, (Postage 1d.)

Swimming and Skating.
Gymnastics.
Chess, with Diagrams.
Whist.
Billiards and Bagatelle.
Draughts and Backgammon.
Cricket.
The Card Player.
Rowing and Sailing.
Riding and Driving.
Shooting.

How to Cook Onions.

Archery, Fencing, and Broadsword.
Manly Exercises: Boxing, Running, and Training.
Croquet.
Fishing.
Ball Games.
Conjuring.
Football.
Quoits and Bowls.

Published by George Routledge and Sons.



SMERLE, OR BELGIAN HOMING PIGEON. (LE PIGEON VOYAGEUR.)

HOMING OR CARRIER PIGEON

· (LE PIGEON VOYAGEUR)

ITS HISTORY, GENERAL MANAGEMENT, AND METHOD OF TRAINING.

BY

W. B. TEGETMEIER, F.Z.S.,

AUTHOR OF THE "POULTRY BOOK;" "PIGEONS;" EDITOR OF THE POULTRY DEPARTMENT OF THE "FIELD," ETC.
HONORARY SECRETARY OF THE GRAND ANGLO-BELGIAN CONCOURS,
CRYSTAL PALACE, 1871.



GEORGE ROUTLEDGE AND SONS,

THE BROADWAY, LUDGATE.

NEW YORK: 416, BROOME STREET. 1871.

189. Julie 97

LONDON:

PRINTED BY WOODFALL AND KINDER,
MILFORD LANE, STRAND.

INTRODUCTION.

THE employment of Pigeons as letter-carriers during the late war between France and Germany, and the establishment of a regular pigeon post from Tours into Paris, has directed the attention of the public very strongly to the performances of these birds; and, in consequence, several articles respecting them have appeared in the various periodicals of the day, but, with one or two exceptions, these have been compiled by persons quite ignorant of the subject on which they have undertaken to write, and the most singular errors have consequently been published.

It is in Belgium that these birds, Les Pigeons Voyageurs, are to be found in the highest perfection. In that country pigeon races, or concours, constitute the great national pastime, which is supported by munificent gifts from His Majesty the King of the Belgians and the Comte de Flandres, the heir to the throne, subsidies from the great cities, and subscriptions amounting to many thousands of pounds annually by those interested in the pursuit.

Pigeon flying has its weekly journal, L'Epervier, most ably conducted by M. Brunin, and its literature. Among the volumes that have been written on the topic may be mentioned "Le Pigeon Voyageur, par M. André Coopers," now out of print, and the two treatises of Dr. F. Chapuis, the larger entitled "Le Pigeon Voyageur," and the smaller, which is devoted to a consideration of the Homing faculty, "Le Pigeon Voyageur Belge, de son Instinct d'Orientation et des moyens de le perfectionner." Magnificent charts of those parts of the Continent across which the races take place have also been published.

also been published.

I have for many years taken great interest in these Belgian birds, have had specimens of the best strains in my loft, and on several occasions have paid visits to the chief Belgian towns in order to acquire full information respecting them. The result of my experience is contained in the following pages, which I hope may be of interest to those who are desirous of acquiring further information respecting the truly wonderful performances of these birds, and of use to those who are anxious to become colombophiles, and have "winged messengers" of their own.

W. B. TEGETMEIER.

CONTENTS.

CHAPTER I.

| HISTORY OF THE HOMING PIGEON. | |
|---|------|
| Anacreon.—Varro.—Pliny.—Chinese Use of Pigeons.—Moore, 1735.—Use on the Turf and Stock Exchange.—London Pigeon Clubs.—Performances of English and Belgian Birds.—Race from Rome.—Rate of Flight.—Use of Pigeons in War.—Paris Post.—Use at Sea.—False Account of Pigeons Flying from the Arctic Regions | PAGI |
| CHAPTER II. | |
| BREEDS EMPLOYED AS HOMING PIGEONS. | |
| Uselessness of English Fancy Carrier.—Dragons.—Skinnums. —Belgian Breeds: Smerles, Cumulets, Demi-Becs.—Selection of Best Birds.—Gun Clubs.—Mode of Getting a Stud. —Brailing | 43 |
| CHAPTER III. | |
| MANAGEMENT OF HOMING PIGEONS. | |
| Loft.— Area. — Nest-boxes. — Nest-pans. — Water Supply. — Matching-pens. — Food. — Salt | 64 |
| CHAPTER IV. | |
| TRAINING THE HOMING PIGEON. | |
| Training Young Birds.—Belgian System.—Male Preferable to Female Birds.—Instances of Stages.—English System.—Flight from London to Antwerp.—Comparison of English and Belgian Modes of Flying the Birds.—Training Breeding Birds.—Old Birds always used in Long Flights.—Panniers. | • |

CHAPTER V.

| THE HOMING FACULTY—INSTINCT OR INTELLIGENCE? | |
|---|----|
| Arguments against Birds Homing by Instinct.—Training Neces- | GE |
| sary Experimental Flights Extent of Vision Moun- | |
| tains.—View from Balloon.—Pigeons Flying by Night . 1 | 05 |
| , volunta i | |
| APPENDIX I. | |
| Anglo-Belgian Concours, Crystal Palace to Belgium 1 | 19 |
| APPENDIX II. | |
| Pigeon-flying from Balloons | 23 |

HOMING OR CARRIER PIGEON.

CHAPTER I.

THE HISTORY OF THE HOMING OR CARRIER PIGEON.

The history of the Homing or Carrier Pigeon may be traced back to a very early period. The account of the return of the dove to the ark is familiar to all readers. Anacreon, in the sixth century before the Christian era, wrote an ode, in which his dove is made to say—

"Venus, for a hymn of love,
Warbled in a votive grove
('Twas in sooth a gentle day),
Gave me to the bard away;
See me now his faithful minion;
To his lovely girl I bear
Songs of passion through the air."
MOORE'S Anacreon.

Varro, who died twenty-eight years before the Christian era, informs us that—

"Some say that the victory of Taurosthenes, at Olympia, was made known in one day to his father at Ægina by a vision; but others say that Taurosthenes carried a pigeon away with him, making her leave her young ones still tender and unfledged, and that, having obtained the victory, he sent off the bird, after attaching a piece of something purple to her, and that she, hastening to her young, returned in one day from Pisa to Ægina."

Pliny also informs us of their use in ancient warfare:—

"They have also been used as messengers in important matters during the siege of Mutina. Decius Brutus sent letters tied by their feet into the camp of the Consuls. What service did Anthony derive from his trenches and his vigilant blockade, and even from his nets stretched across the river, while the winged messenger was traversing the air?"

Thaunus, in his fourth book, relates an anecdote that supplied Rogers with a subject for several stanzas in "The Pleasures of Memory," to the effect that at the siege of Harlem, when that city was reduced to the last extremity, and at the point of opening its gates to a base and barbarous enemy, a design was formed to release it, and the intelligence conveyed to the citizens by a pigeon. Let us hope, however, that the citizens were not so ungrateful as the poet

suggests, and that they did not first welcome and then eat the messenger:—

"Sweet bird! thy truth shall Harlem's walls attest,
And unborn ages consecrate thy nest;
When, with the silent energy of grief,
With looks that asked, yet dared not hope relief,
Want with her babes round generous Valour
clung,

To wring the slow surrender from his tongue,
"Twas thine to animate her closing eye;
Alas! 'twas thine, perchance, the first to die,
Crushed by her meagre hand, when welcomed from
the sky."

This might have been written of Paris in 1871. Truly History repeats itself.

The most ancient nation now extant, whose manners and customs change not in centuries, still employ—as doubtless for ages they have employed—the faculties of the Homing Pigeon. Consul Swinhoe, in his recently published account of the "Natural History of the Island of Hainan," on the east coast of China, informs us that pigeons are there used as letter-carriers, and that a Chinese work on the island has the following note respecting them:—

"Their necks swell as if with goîtres, their colours of more than twenty kinds, their disposition amatory, every month having young.

"Those with deep purple eyes grounded with black, with black eyes spotted with yellow, with oily yellow eyes clouded with white, and those with eyes of a

burnt oil colour, if let loose a thousand li (333 miles) from home, will always return. The Yew-yang-tsatsoo states that the Po-sze vessels keep a great many pigeons on board, and use them for conveying family letters to the homes of the navigators."

Leaving the further consideration of the employment of pigeons by the ancients to the archæologist, we pass on to their utilization in this country in more modern times.

The history of the Homing or Carrier Pigeon in England is soon told. John Moore, a noted worm-doctor of Abchurch Lane, who was celebrated by Pope in some lines beginning—

"How much, egregious Moore, are we Deceived by shows and forms; Whate'er we think, whate'er we see, All Human kind are worms;"

published in 1735 the now very rare pamphlet entitled the "Columbarium." In this he describes the Carrier, stating—

"It is frequently made use of to carry a letter from one place to another. And such is the admirable cunning or sagacity of this bird, that though you carry them hoodwinked twenty or thirty miles—nay, I have known them to be carried threescore or a hundred, and there turned loose—they will immediately hasten to the place where they were bred.

In Turkey, they call them Bagatins, or Couriers, and the Turks and Persians make a common practice of breeding this sort of pigeons in their seraglios, where there is one whose business it is to

feed and train these birds, for the use afterwards designed, which they do in this manner:—When a young one flies very hard at home, and is come to its full strength, they carry it in a basket or otherwise about half a mile from home, and then turn it out; after this, they carry it a mile, then two, four, eight, ten, twenty, and so on, till at length they will return from the farthest part of the kingdom. practice is of admirable use, for every Bashaw has generally a basketful of these pigeons sent him from the Grand Seraglio, and in case of any insurrection or other emergent occasion, he braces a letter under the wings of a pigeon, whereby its flight is not the least incommoded, and immediately turns it loose; but for fear of its being shot or struck by a hawk, they generally despatch five or six, so that by this means despatches are sent in a more safe and speedy method than could possibly be otherwise contrived.

"N.B. If the pigeon be not practised when young, the best of them will fly but very indifferently, and may possibly be lost."

Moore also quotes an account from an old traveller, Lithgow, who stated that when the French and Venetian armies were besieging the city Ptolemais, the soldiers, seeing a pigeon flying into the city, set up so great a shout, that the bird fell with her letter, which was to the effect that the Sultan was coming in three days to raise the siege; but that the Christians, reading this, forged a letter to the opposite effect, and on forwarding this into the city by the pigeon, it was immediately surrendered.

Moore, however, had too much practical

knowledge of pigeons to believe this story, which he terms a "little unphilosophical."

In 1765 a scarcely disguised plagiarism of the worm-doctor's "Columbarium" appeared, under the title of "A Treatise on Domestic Pigeons." In this the compiler adds to Moore's account of the Dragon, or Dragoon, the following anecdote:—

"A gentleman of my acquaintance, having a small wager depending, sent a Dragoon by the stage coach to his friend at St. Edmond's-Bury, together with a note, desiring that the pigeon, two days after his arrival there, might be thrown up precisely when the town clock struck nine in the morning, which was accordingly executed, and the pigeon arrived in London, and flew to the sign of the Bull Inn, in Bishopsgate Street, into the loft, and was there shown at half an hour past eleven o'clock the same morning on which he had been thrown up at St. Edmond's-Bury, having flown seventy-two miles in two hours and an half; the wager was confirmed by a letter sent by the next post from the person at St. Edmond's-Bury.

"I could relate several more exploits of this nature performed by Dragoons, particularly of their being thrown up and returning home by moonlight, &c., but the above may be thought sufficient."

During the early part of the present century, pigeons were extensively employed in England for the conveyance of intelligence to the newspapers, and also for stockjobbing purposes. A writer in *Bell's Life*, January 1st, 1870, who

was evidently well acquainted with the subject, states that-

"Before electricity was brought into operation, we always had at our office a large flight of pigeons entirely for business purposes, and these were a cross between a Dragon and Antwerp of various colours, including blue and chequered mealies, reds, and blue pieds. These birds were continually at work, and rare performers; in fact, throughout the season they brought home nearly all the news from the principal race meetings within one hundred miles of the metropolis, and with favourable weather we could always tell within a few minutes the time they would arrive from Newmarket, Goodwood, Stockbridge, Winchester, Southampton, or Ascot. In consequence of the great height they soared while accomplishing their journey we very seldom lost one at the hands of a gunner, and their greatest enemies were the hawks, more especially if it was a bad partridge season."

Even as late as 1862, pigeon despatches were used for some of the races, and in that year the return of the winner of the Goodwood Cup was falsified by the servants of a racing agent, who employed pigeon expresses, as there was at that time no telegraph to Goodwood racecourse.

The same writer also alluded to their employment on the Stock Exchange. But few persons would have imagined that no inconsiderable portion of the wealth of the Rothschild family was the result of pigeon-flying:—

"Baron Rothschild, before electricity was brought into operation, had an immense quantity of pigeons for express work. And a splendid lot they were, of various colours, including mealies, blues, reds, blue pieds, &c. These birds brought the news of the state of the money markets in Paris, and frequently the Baron cleared in England, almost immediately after the news arrived, many thousand pounds by buying stock. These birds did not come direct from the Continent, for there were relays throughout the distance, and the birds that were housed at Dover brought the messages from Calais, when they were despatched by another pigeon, whose home was at Sittingbourne, and took on from there to Blackheath, and from thence carried on by another bird to the metropolis. A great many of these pigeons were a cross between a Dragon and Antwerp, but the majority were small blue Antwerps."

At the present time pigeon races are at a low ebb in this country. The sporting papers continually furnish accounts of races from Chelsea to the Borough, or Shoreditch to Kent Street—distances of a few miles in extent, that appearmere child's play to those acquainted with the performances of the Belgian birds. There are, however, some clubs that really do good work, and show some very respectable performances. As an example, "The London Pigeon Club" may be quoted. It has been established some fifteen years, and holds its meetings at 9, John Street, Berkeley Square.

The following is its list of races for the season 1871:—

A Sweepstakes from Chertsey, 20 Miles, June 1st, £1 each. Limited to 30 Members. For birds bred in 1871.

A Sweepstakes from Basingstoke, 50 Miles, June 29th, £1 10s. each. Limited to 30 Members. For birds bred in 1871.

A Sweepstakes from Semley, 100 Miles, July 27th, £2 each, for birds of all ages. Limited to 20 Members.

A Sweepstakes from Exeter, 172 Miles, August 31st, £2 each, for birds of all ages. Limited to 20 Members.

In addition to the money prizes, a Cup will be given to the winners in each race from the funds of the Club.

The following is an abstract of the regulations:—

That the weekly subscriptions for these races will

commence on Wednesday, January 4th.

That all birds for the Chertsey and Basingstoke Sweepstakes must be bred in 1871, and must squeak distinctly at the time of marking, no birds to be marked before Wednesday, February 15th; and all birds for the Semley and Exeter Sweepstakes to be marked on or before May 17th, 1871.

That any member at the first night of his marking any birds, must name to what member's address his bird will come to, not more than three birds to

come to the same address.

That all members are at liberty to have six birds, but no more out on the race day, but should such birds be flying when the race bird comes, time shall be taken when the last bird of the flight pitches. No member to send any bird or birds but the race bird in any direction whatever on the race day, under pain of forfeiture of all moneys paid for such race.

That all birds to contend for the several races shall be marked by the Committee at the Club House on the race day previous to going to the stone to contend for the race; and on the night previous Timekeepers shall be appointed from amongst the members, but in case of their not being able to appoint them before twelve o'clock, then the President shall have power to appoint the Timekeepers both for start and finish.

That each bird to compete for the prizes shall be marked at the starting-post just before such bird is started, and the time and mark entered in a book by the Timekeepers, and on arrival, the time and mark also shall be taken and entered by the Timekeepers when the bird pitches, and the bird must be produced at the Club House the same night for its marks to be verified.

That the whole of the Subscription for each race shall be awarded in the following manner: half the stakes for the first bird, two-thirds of the remainder for the second, and the balance for the third; should only one bird arrive on the day of the race, such bird to be entitled to the whole of the stakes; should two birds arrive on the race day, the third prize to be awarded between first and second bird as under, two-thirds to the first bird, and one-third to the second; should no bird arrive on the race day, the whole of the money to go to the General Fund.

Ten per Cent. to be deducted from the stake of the winning bird and added to the General Fund.

That on the last meeting night previous to any race the names of all members contending in such race shall be placed in a Ballot Box, and an equal number of Tickets be placed in another Ballot Box, and that each Name and Ticket be drawn simultaneously by two persons appointed by the President to determine the order in which each bird shall be started, that no member shall know the time that any bird is started, until such bird is on the wing.

That the Committee shall appoint the time of

starting all birds for all races.

That any member shall be at liberty to mark as

many birds as he may think proper.

That should any question arise not specified in the above rules, such question to be decided by the Committee, and their decision to be binding.

The regulations differ very greatly from those adopted in Belgium, where all the birds are started together. Nevertheless, some very good work has been done in England. Some years since, the late Mr. Gandell wrote:—

"Mr. Hudson flew seven birds, from Exeter to Peckham, the first arriving in 4h. 15m.—a distance, by road, of 172 miles. There were six cocks and one hen. These birds were the first that did so long a distance in England. The next year Mr. Burlington had three hens that did a greater journey—viz., from Falmouth to Camberwell, a distance of 269 miles by road, and arrived the same day; they were trained from Exeter right into Falmouth. This year, Mr. Fletcher had a pigeon come from Ply-

mouth. It was tossed at 7 A.M. by itself, to contend for a prize from that place to London. It was found on its eggs the following morning at seven; and Mr. Corderoy has had birds come from Guernsey to Bermondsey."

Mr. Gandell was an enthusiastic amateur, and maintained strongly the merits of the English breeds of Homing Pigeons. As to the comparative performances of the British and the Continental birds, he wrote:—

"With regard to the Belgian birds doing so much longer distances, you must bear in mind that their country is a level tract for miles and miles—no hills or forests, such as we have—the atmosphere is much clearer, and you can see easily sixty miles with the naked eye. Again, they have not the great enemy that we have—the gun. Here, if a pigeon, exhausted, pitches on a farm building, out comes the farmer or his son and pops him off; or a gamekeeper, seeing him lowering as he approaches the covert, shoots him. I know these to be facts, not merely from conversations I have had with both keepers and others, but from having had many of my birds come home shot. In Belgium the station-masters look after the birds, and give them water, &c.; and they also have carriages especially for them, well ventilated, and they are not smothered up with the luggage as ours are. Again, many birds are taught to go down into the fields to feed, so that, if they lose their road, they are not compelled to frequent dovecotes and pigeon-houses, and get caught as ours are. Most of our birds are shot or caught when roosting, I believe. I believe that as yet we are only in our infancy in this sport, as Brighton, a few years ago, was considered a long distance for a young bird to do. Now we have them doing Semley (100 miles) singly, and not, as in Belgium, all thrown up together, but every bird timed away by itself, and kept half an hour apart, and not in droves of 500 to 1,000 let off together, the good birds dragging home the duffers, and the duffers fagging and detaining the good birds. A sweepstakes from Semley is sometimes as close as a five-mile fly, actually having to be decided by seconds!

"Could not a club be got up for gentlemen, to subscribe so much a year each, and to have a certain number of prizes flown for every year? We have fancy pigeon clubs; why not have a pigeon-flying club?"

During the last season, I flew some birds for Mr. Webster, of Leeds (180 miles from London). These birds arrived by train at the Great Northern Station, King's Cross, on Wednesday, June 1st, at 11.50, and were stamped and thrown up at 12.10. The wind was blowing a strong breeze from the west; the sky was cloudy, but the air clear. The result of the trial is given in the following letter, which I received from Mr. Webster:—

"Sir,—Inclosed you will find the two stamped feathers. My pigeons did not arrive till early this morning, the dun one at 7.30 A.M., the red dappled one at 8 A.M. I can only account for them not finishing the journey last night by the fact of there being a very strong westerly wind. The birds seem very much exhausted, and must have encountered squally weather.

"As I am not satisfied with their being benighted, and as they have usually come in six hours, if it is convenient to you, I will send the pigeons to you next Monday at the same time, and should be much obliged if you would try them again, as I should like you to see that they can fly the distance in about six hours.

"A. Webster, Jun.

"Kirkstall, near Leeds, Thursday, June 2."

When the state of the weather, the hour at which the birds were flown, and the fact that they were liberated immediately on arriving at the end of the journey, without having been supplied with either food or water, are taken into consideration, the performance was not unsatisfactory.

The following week birds were again forwarded to me by Mr. Webster. They arrived in the evening, and, after having been fed, were liberated, one at 6.5, the second at 6.30 the following morning. The first arrived at Leeds at 12.30, the second at 2.30, performing the distance in six hours and a half and eight hours respectively.

The wind in London was north-west, but very light. In Leeds a strong westerly breeze was blowing. The birds were both Belgians, measuring one inch and a quarter from the front of the eyeball to the tip of the beak. They had reddish pearl eyes, and well-rounded, capa-

cious skulls. The one that took the longest time to perform the journey was in moult, having only six flight-feathers to throw, and was consequently one feather short in the wing.

With an adverse wind, the time was very good, and no doubt the birds could perform longer journeys if trained.

But the general work done in this country is not as good as this in speed. In fact, the English strain of birds is inferior to the Belgian.

Thus, after the race for the Two Thousand Guineas at Newmarket, in 1870, the Morning Advertiser reported that—

"Eighteen London pigeon fanciers flew a match with pigeons. The conditions were, the first bird arriving home with the name of the winning horse to be the winner: an Antwerp, the property of Mr. D. Hird, of the Kent Road, flew the distance, about sixty miles, in one hour and thirty-three minutes."

There is nothing remarkable in the performance here recorded, the speed being far inferior to that of the best birds flown on the Continent.

It is in Belgium, however, that pigeon racing is practised in the highest perfection. Every town—and in some districts almost every village—has its Société Colombophile. There are hundreds of such societies in the kingdom, including many thousand amateurs. In Brussels a journal,

L'Epervier, is exclusively devoted to the sport, chronicling the programmes of the proposed races or concours, and giving the results. It is, in fact, the Belgian racing calendar.

The distances flown by the Belgian birds appear at first almost incredible. Concours of young birds are often arranged for 200 miles, and races of 300, 400, and 500 miles for old birds are of weekly occurrence during the racing season. Some of these contests assume a national character, being offered to all the amateurs of the kingdom. These receive a subsidy of 1,000 francs from the city of Brussels, and services of plate from the King of the Belgians. Of these races, the following account of that of 1868, by Mr. Mills, the treasurer of the Société d'Abéona, may be taken as an example:—

"On the present occasion our national match reached the unprecedented number of 1,507 competitors. These birds are specially trained for this great contest, and as a body represent the very best our lofts can produce. The town selected this year was Agen (department of Lot et Garonne), a little farther south than Bordeaux—a distance of upwards of 500 miles from Brussels. What enhanced the importance of this year's contest was the fact that His Majesty the King of the Belgians offered a valuable gift to the winner of the first prize, and H.R.H. the Count of Flanders one to the winner of the second prize. The total value of the prizes amounted to

the large sum of 19,000f., or £760. The birds were set at liberty on the 18th of July, at 5 a.m. The first pigeon reached his loft the following morning at four minutes past six, and the one which received the last or 216th prize the day after, at 10.30 A.M. But we expect, weather permitting, to have birds back the same day. Thus, in 1865, the town selected was Toulouse, at a still greater distance, and nevertheless six birds reached Brussels the same evening, having accomplished their long journey in fifteen hours.

"C. H. MILLS.

" Brussels, July 25, 1868."

Last year (1870) the race took place from Bazas, a town in the south of France, 32 miles from Bordeaux, and 480 from Brussels. birds, 838 in number, filled thirty baskets. They were set free on Saturday, July 23rd, at half-past four in the morning, the wind being south-west. Seven of the birds arrived on Sunday, the winner of the first prize at 12.44, and that of the second at 12.45, both belonging to Brussels, and the following Monday 120 had returned.

But the longest race on record was that flown from Rome to Belgium in 1868. Two hundred pigeons, all of which had been flown from the south of France, but none beyond, were entered for the race. The distance is 900 miles, nearly 500 of which was over country new to the birds.

They were liberated on July 22nd, at half-

past four in the morning, the weather being beautifully fine.

The first arrival was on Monday, August 3rd, at five minutes to two in the afternoon, the bird belonging to M. Keyne, of D'Ougree, near Liége.

The second, belonging to M. Dreyse, of Dalhem, near Liége, reached home on the same day, at fifteen minutes past eight in the evening.

The third, the property of M. Havard, of Bellaire, near Liége, on August 4th, at twenty minutes to six in the morning. And the fourth, belonging to M. Perotte, of Liége, on August 6th, at a quarter to two in the afternoon.

The fifth and sixth prizes were gained by M. Stiennon, of Herstal, and M. Hanne, of Liége, on August 10th.

The seventh by M. Smal, of Seilles, on August 11th.

The eighth by M. Sonval, of Ramet, August 12th.

The ninth by M. Bicheron, of Jemeppe, August 18th; and the tenth bird returned to Maestricht on the 11th of September.

This race was one of the most interesting character, as the birds had to fly over 500 miles of country entirely unknown to them. If they flew in a direct line, they must have crossed the Apennines, near Monte Cimone, where those mountains are between 6,000 and 7,000 feet

high, and the Alps near the St. Gothard, where the lowest passes are almost 7,000 feet, and continued their course across the whole of Switzerland. But it is most probable those that returned rounded the westward of these mountain chains, and, skirting the coast, came by way of Nice through France.

Of the 200 liberated, not more than twenty ever returned.

It may be asked what is the rate of flight of these Belgian voyageurs. The question is not easy to answer, inasmuch as the conditions vary so greatly. The rate of flight being influenced by the state of the atmosphere, the force and direction of the wind, and the circumstance of the bird knowing its route perfectly, or having to seek its way. Dr. Chapuis, in his work "Le Pigeon Voyageur," endeavoured to solve the question, and after comparing the results of 300 concours, selected twenty-one, in which the weather was favourable, the hours of departure and arrival perfectly well ascertained, and the pigeons liberated in sufficient numbers to eliminate accidental shortcomings. These twenty-one results I have arranged in the following tabular form, giving the name of the society organizing the concours, the date and locality and hour of the flight, the home and arrival of the birds, and the rate of flight in yards per minute:-

| Name of Society. | Date. | Flight from | То | Hour of Flight. | | Rate of Flight per Minute in Yards. |
|--|---|---|--|--|--|---|
| 1. Union et Progrès 2. Dinantaise. 3. D'Eole 4. D'Abéona 5. Union et Progrès 6. St. Esprit 7. Hirondelle 8. Dinantaise. 9. Du Ramier 10. D'Abéona 11. Hirondelle 12. Union et Progrès 13. Colombe. 14. Colombe. 15. St. Esprit | June 21, 1857 June 24, 1855 Aug. 26, 1855 July 2, 1854 July 1, 1855 July 9, 1854 July 2, 1854 July 2, 1854 July 12, 1857 June 3, 1860 July 5, 1857 July 19, 1854 July 22, 1857 July 22, 1857 | Paris Paris Paris Paris Paris Paris Paris Orleans Nevers Nevers Blois Châteauroux Tours St. Maure Châtellerault | Namur Brussels Brussels Verviers Dison Dinant Huy Brussels Dison Brussels Verviers Verviers | 5 a.m. 6 a.m. 7 a.m. 6.50a.m. 5 a.m. 5 a.m. 6 a.m. 5 a.m. 5 a.m. 5 a.m. 5 a.m. 5 a.m. 5 a.m. | 10.59a.m. 2.31p.m. 1.34p.m. 10.16a.m. 12.14p.m. 1.22p.m. 1.42p.m. 12.42p.m. | 858 1430 1014 880 1100 1161 1353 1017 867 1021 1780 1452 1127 1105 |
| 16. Colombe | June 28, 1857 June 21, 1860 July 19, 1862 July 25, 1857 | Lyons Angoulême La Réole La Réole | Brussels Verviers | | | 1177 1219 1041 |

The rate of the above flights in English measurement has been calculated by regarding 11 yards as equal to 10 metres, which, though not precisely correct, is sufficiently so for practical purposes; and it is exceedingly convenient to regard 200 metres as equal to one furlong (220 yards), and 1,600 to a mile (1,760 yards). If we take the swiftest rate given above (No. 11), which is characterized by M. Chapuis as extraordinary, we find that the first bird must have flown at the rate of 1,781 English yards, or more than one mile per minute during a flight that lasted for four hours and three-quarters. Upwards of sixty miles an hour for nearly five

hours in succession! Truly this is a wonderful performance; and, good as it is, it is greatly exceeded in short-distance flights, in which a bird knows its route perfectly.

The history of the pigeon voyageur would be incomplete if it did not include the remarkable applications made of its Homing faculties during the late war. In August of last year, I recorded in the *Field* that—

"The national pastime of Belgium, the great pigeon races from the southern provinces of France, has been abruptly put a stop to by the war. The French authorities have very naturally interdicted the entry of Belgian pigeons into France. When it is borne in mind that there are 10,000 trained pigeons, any one of which could convey intelligence from Paris to the frontier towns of Belgium in which they are located in the space of five or six hours, we cannot be surprised at the French authorities interfering with this pastime. The strategic information conveyed by a single pigeon might lose a battle or an empire."

The battles and the empire were lost, and the French, shut up in Paris, were glad to avail themselves of the services of the comparatively few Homing pigeons that were flown in that city. These were sent out in balloons, and, when liberated, conveyed to their homes the intelligence attached to their legs or central tail-feathers.

The following regulations were issued from the General Post Office in London:—

"The Director-General of the French Post Office has informed this department that a special despatch by means of carrier pigeons of correspondence addressed to Paris has been established at Tours, and that such despatch may be made use of for brief letters or notes originating in the United Kingdom and forwarded by post to Tours. Persons desirous of availing themselves of this mode of transmission. must observe the following conditions: Every letter must be posted open, that is, without any cover or envelope, and without any seal, and it must be registered. No letter must consist of more than twenty words, including the address and signature of the sender; but the name of the addressee, the place of his abode, and the name of the sender-although composed of more than one word-will each be counted at one word only. No figures must be used: the number of the house of the addressee must be given in words. Combined words, joined together by hyphens or apostrophes, will be counted according to the number of words making up the combined word. The letters must be written entirely in French, in clear, intelligible language. They must relate solely to private affairs, and no political allusion or reference to the war will be permitted. The charge for these letters is 5d. for every word, and this charge must be prepaid, in addition to the postage of 6d. for a single registered letter addressed to France. The Director-General of the French Post Office, in notifying this arrangement, has stated that his office cannot guarantee the safe delivery of this correspondence, and will not be in any way responsible for it.—General Post Office, Nov. 16."

The messages, when received, were set up in type by M. Steenackers, the Director of the Post at Tours, and then photographed on a reduced scale.

The annexed diagram is an exact fac-simile

| | | _ |
|-----|---------|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| , | men a . | |
| | | |
| 1 | | |
| 1 | | |
| 1 | | |
| 1 1 | | |
| | | |
| | | |
| | | |

of the size and form of the front page of one of these microscopic newspapers, sent from M. Steenackers to M. Mercadier, Director-General of the Paris telegraphic service. The first column contains the address to which the despatch sheet is to be sent by the owner of the pigeon, in characters legible by the naked eye. The other three columns contain each on the average thirty-six messages with their addresses. The despatch sheet the diagram was taken from contained 226 distinct messages. On arriving at the telegraphic bureau, the despatch is read

by the aid of a magnifying glass, and each message is transcribed and forwarded to its destination. The postal charges on the messages conveyed by this one despatch sheet amounted to considerably over £100, at the rate of one franc per word. Instead of adopting the old plan of tying the paper round the leg of the bird, it is rolled up tightly and placed in a quill, which is then tied longitudinally to the central feathers of the tail.

The first pigeon despatch was received in Paris on the 14th of November, about four in the afternoon, and after having been magnified and copied, the messages were delivered by telegraph the same evening.

The plan proved a decided success, and the post-office at Tours was besieged by persons anxious to communicate with their friends in Paris. The first three birds carried in 1,000 despatches. A service of post-office orders to the value of 300 francs was organized, and the telegraphic reductions of the *Times* and other papers were constantly sent into Paris by pigeon express.

Some valuable suggestions were made in the Field newspaper a short time since by a well-known amateur, who signs himself "Carrier," on the employment of pigeons in war. He writes:—

"Had any one, previous to the late war, suggested returning to the use of pigeons for carrying despatches, he would have been laughed at; but the complete isolation of whole provinces, large fortresses. and a great city like Paris, by the destruction of telegraph wires, and the apparent impossibility of laying wires so that they cannot be discovered, leave no doubt that in future pigeons will again play a

part in the military organization of nations.

"The words 'carrier pigeon' mislead many. pigeon will fly homewards when set at liberty, and by its means a message can therefore be sent from a given spot to the bird's home. But no pigeon ever did or ever will carry a message from home to any other spot. We see, therefore, that the bird is only a medium of intelligence one way, and it is for man to make the wonderful instinct, which is developed in a few breeds only, useful and subservient to his re-

quirements.

"The length of England is about 350 miles, and its breadth, in the midland districts, about 200 miles. It will be thus seen that it is very considerably under the distance that is commonly flown by great numbers of voyageur Pigeons. It would be quite easy; therefore, to train birds to traverse England from Berwick to Plymouth. Pigeons have been known to do from Marseilles to Brussels, thereby traversing France at nearly its greatest length. How easily, therefore, these birds might have rendered most important service to France in the late war, can be seen by the following list of distances from Paris: - Paris to Châlons, about 92 miles; Sedan, 132; Verdun, 140; Metz, 175; Thionville, 176; Phalsbourg, 225; Bitsche, 231; Toul, 164; Lyons, 241; Strasbourg, 250; Bordeaux, 305; La Rochelle, 245; Brest, 305; Tours, 125; Orleans, 68. These distances are calculated in a straight line, which is very nearly what a

carefully trained pigeon will travel in, and the figures, although not quite accurate, may be taken as very

nearly correct.

"For use in war, it would be necessary to train the birds at stations established at places considered most suitable by the military authorities, and each bird would be stamped with the name of the station at which it is reared. The birds could then be regularly trained from the different stations to their respective homes; and, inasmuch as the greatest length of England is within the powers of even moderatelytrained birds, there would, by keeping up a proper interchange of birds trained from station to station, be no difficulty in getting intelligence from any part of Ireland or Scotland to any part of England by the aid of two birds, should the entire distance be considered too great for one. If it were desirable also to send duplicates of the message to any or all other stations, it is obvious that this could easily be done from any one station, provided there was a sufficient interchange of birds among the whole of the stations."

In addition to their use in war, another employment of Homing pigeons has been frequently suggested. I allude to the conveyance of messages from vessels foundering at sea. The whole matter was brought prominently before the public on the loss of the steamship, the City of Boston.

On this occasion the *Daily Telegraph* published a leading article, from which the following is extracted:—

"The painful anxiety so long felt has turned the

thoughts of men on both sides of the ocean to the subject of communication with distressed or delayed vessels; and, among the suggestions, one from America seems to deserve attention. Some may be inclined to smile at the idea, but we are by no means sure that it is without practical value, and its present interest will be questioned by none. The originator of the notion asks why the instincts of carrier pigeons should not be systematically employed by vessels upon the wide sea. There are at present only two chances of sending any message from the deep -one by means of passing ships, and the other by the obviously precarious mode of a sealed bottle. The American writer proposes, that the singular and well-known power of the carrier pigeon to find its way home from very great distances should be utilised for transmitting to shore messages from ships in difficulty, or windbound. He would have a special dovecot of the best bred birds attached to the office of shipping companies on each side of the ocean; and each outward-bound ship would take a few birds on board at starting. From mid-ocean no pigeon, perhaps, could reach land on either side; but from points not exceeding a few hundred miles from the English or American coasts, they might be able to do so; and since they fly at a very rapid rate, they would come to hand speedily if they came at all. A little slip of paper attached to the foot would often tell us news of the utmost importance. The belated ship, for instance, if she were safe, but in difficulties, would be able to communicate her exact position and the nature of her disasters, so that aid might be sent: while, if her state were hopeless at the time, it would yet be an immeasurable relief to be told the worst, and to be rid of that most bitter suspense endured by friends who know not whether those dear to them are alive or dead. There are many conditions, indeed, under which the briefest intelligence would be of the greatest value; but the question which at once arises is, whether or not the 'homing' faculty of the carrier

pigeon could be thus employed.

"Would a bird—liberated, say, three hundred miles from the American or English coast-come over the sea to its nest or loft? It is a question upon which we ought to consult Mr. Tegetmeier, and those who, like him, have studied the powers and habits of pigeons; but a few experiments with first-rate carriers. taken from the dovecot under favourable circumstances, might soon settle the problem. The difficulty, we should imagine, would be to get the pigeons to strike away from the ship at sea. Nothing is more marked than the pertinacity with which birds cling to the rigging of a vessel upon the ocean; they will rather suffer themselves to be shot, or seized by the hand, than commit their wings to that barren and unknown expanse of sky and water around them. The same terror is noticeable when they are set free from the car of a balloon; after circling round and round, they hasten back, if they can, to the wickerwork or ropes; and we should fear that our seamessengers also would thus return and perch upon the yards, after a short flight round the vessel. But this, again, is a matter for experiment; and fanciers know how to stimulate the passion for home which the pigeon always feels, in addition to its marvellous faculty of discovering at once where that home lies, however far away, and of shaping its flight directly towards the distant spot. We should be glad to know the opinions of experienced flyers of pigeons upon a suggestion so interesting. Were it found at all feasible, a new and most useful public employment would be at once discovered for these beautiful and favourite creatures; and one can even conceive a department of maritime intelligence, served entirely

by a staff of birds, whose modest pay would be peas. The floating telegraph ship at the mouth of the Channel should certainly keep a large stock of carriers on board, to distribute to outward-bounds; and she, indeed, could most advantageously conduct the experiment, since her birds would be trained to the sea. We should gladly believe it possible to make use of this pretty aerial telegraph, whose love of home is the electric impulse that turns its little heart into a magnet. Let the learned in pigeon-flying try the experiment. In the case of the City of Boston, a message might have saved a world of terrible anxiety, or even have helped to hasten the welcome return of the missing ship, should our fears be doomed to such a delightful disappointment."

In reply to these suggestions, I forwarded the following letter to the Editor, which was inserted in the *Daily Telegraph* for March 30:—

"SIR,—In reference to the suggestion to employ pigeons for the purpose of conveying messages from disabled vessels at sea, I may perhaps be permitted to say a few words to correct some erroneous notions that are prevalent on the subject of 'homing' pigeons. Pigeons do not return home by the aid of an instinct corresponding with that which impels the flight of migratory birds, such as the swallow, &c., but by observation of the landmarks in the course of their flight. The best-bred pigeon in the world would be lost if taken a distance of one hundred miles for its first flight; whereas, if trained by gradually increasing stages of five, ten, twenty, and thirty miles, a good bird would almost certainly return. training is evidently impracticable at sea, and therefore I must doubt the possibility of a bird returning

to land over any great distance of water, unless, in circling round to discover the landmarks with which it is acquainted, it should descry the distant coast. In consequence of the curvature of the earth's surface, namely, eight inches a mile, which increases with the square of the distance, it is easy to calculate the height to which a bird must ascend in order to discern any distant object—an elevation of 400 feet would give a view of 25 miles on every side; and Mr Glaisher has informed us that, at half a mile elevation, he saw the whole course of the Thames from Richmond to the Nore.

"Much misconception prevails respecting the distance 'homing' pigeons will return. The longest races of the Belgian amateurs are usually flown from the south of France—some 500 miles—and the birds are trained by numerous stages on the journey, and if this training is too rapid, many are lost.

"The longest race on record was from Rome to Belgium. All the birds had been trained to fly from as far off as the south of France, but no farther. Of the two hundred liberated, less than twenty returned, and the first did not arrive for nearly a fortnight.

"Another fact bearing on the subject is that the birds require constant exercise to keep them in training, and it would be as impossible for a bird that had been caged many days to fly three or four hundred miles without resting, as it would for a horse to gallop twenty miles if it had been confined in a stable for a fortnight.

"Bearing all these facts in view, I am afraid the project is not practicable, and I should think that few fanciers would lend good birds to be liberated two or three hundred miles at sea. At least, they

would not expect to see them again."

In opposition to the opinion as to the impos-

sibility of employing Homing pigeons in any long-distance voyages, the story of the return of some birds from the Arctic regions will probably be resuscitated. This ridiculous canard has been received with some amount of credence, in consequence of having been reproduced in Yarrell's "British Birds." Mr. Yarrell, as I can state most positively, as I had the pleasure of knowing him intimately, was not a pigeonfancier, and fell into strange mistakes regarding the varieties of the Columbia livia; he even stated that the old birds feed the young by placing their beaks in the open mouths of the latter, the converse being the fact. A strange error for so good a naturalist, and which proved how thoroughly he had overlooked the extraordinary adaptation of the bill of the young to the mode in which it is fed. It is not, therefore, surprising that he had a pigeon figured flying home with a letter tied under the wing, and that he believed in the stupid story of the return of birds from Sir John Ross. The following is the account as given by the Rev. E. J. Dixon, in his "Dovecote and Aviary."

"It appears that Miss Dunlop, of Annan Hill, Scotland, presented Sir John Ross, on his leaving Ayr on his chivalrous expedition, with two pairs of carrier pigeons, an old pair and a young one. It was arranged that he should despatch the young birds

when he had fixed himself in winter quarters, and the old ones when he fell in with his missing friend Sir John Franklin, in search of whom he was about to expose himself to Arctic dangers. The gift was kindly meant, but very foolish; the lady had much better have presented the voyager and his crew with an enormous and well-seasoned pigeon-pie to eat, and a barrel of good Scotch ale to drink, on the first coming in sight of the ice; for hope deferred maketh the heart sick, both with friends at home and with sailors abroad. On Sunday, the 13th of November, 1850, two strange pigeons were observed flying about the dovecote at Annan Hill, which, being under repair at the time, was unfortunately shut. Suspicion was excited, and on next Thursday they were traced to the seat of a neighbouring gentleman, and one was secured.

"The fact of their being captured elsewhere, proves that they were only a pair of stray pigeons, in search of a home they knew not where, and not Miss

Dunlop's pigeons come back again.

"The account stated that 'the bird's feathers were ruffled and somewhat torn, showing, very probably, that the despatch attached to it had worn off in the long and weary flight of somewhere about 2,000 miles. Unfortunately, therefore, there is no written intelligence from the explorers. The other bird has not been caught. We remember no similar feat being performed by a pigeon,' &c. &c."

In the Manchester Guardian, Mr. J. Galloway, a well-known "colombophile," the owner of a celebrated strain of Homing birds, threw discredit on the whole affair, in the following very sensible remarks:—

"Those who know anything of the habits of pigeons, or the careful training requisite to enable them to accomplish long flights, will not easily be led astray by the clumsy invention of some ignorant wag, desirous of practising on the credulity of the public. I'wo pigeons were said to have been seen at a considerable distance from their cot, because it was shut up. This would be contrary to their habits; they would remain at their old habitation until nearly famished with Again: one of them had the feathers ruffled or disordered under the wing, as if a letter had been fastened there. Now, no express flier of pigeons would think of tying a letter under its wing. The usual practice is to roll some fine tissue paper neatly round the leg, secured with a thread of silk; and thus the bird can travel, without the paper causing resistance or impediment to its flight. Then, more marvellous still, the creature must have flown 2.000 miles!—a considerable distance of which must have been over snowy or frozen regions. In modern times, no such distance as 2,000 miles has been accomplished by any trained pigeon. A strange and mistaken notion prevails that it is only necessary to send a flying pigeon away from home, and that its instinct will invariably lead it back. Let any one try the experiment, and send the best-bred birds at once from Manchester to Birmingham, and I venture to assert that not one will return to Manchester without previous training, viz., taking them short distances at a time, and then increasing them by degrees. It has been asserted that pigeons are guided on their return home from long distances by instinct. Instinct is said to be unerring; not so the pigeon's flight. If instinct be the guide, why not fly through foggy weather with equal speed and facility as in clear sunshine? This, it is notorious, they cannot accomplish. When the ground is covered with snow, pigeons seem

to miss their points of guidance, and are lost. This would seem to favour the opinion that they travel by sight, and are less indebted to instinct than is generally imagined. Homing pigeons do not fly at night; they settle down if they cannot reach their home by the dusk of evening, and renew their flight at daylight next morning."

The history previously given of the concours from Rome, 900 miles, in which, out of 200 birds, flying over 400 or 500 miles of ground new to them, less than twenty ever returned, and not one until a fortnight had elapsed, is sufficient to disprove this ridiculous story; and these birds, it should be remembered, were the best "voyageurs" that Belgium could produce.

CHAPTER II.

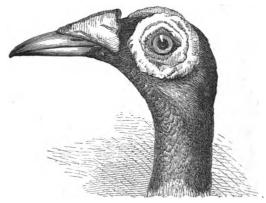
ON THE BREEDS EMPLOYED AS HOMING OR CARRIER PIGEONS.

In speaking of the breeds employed as Homing pigeons, it is desirable, in the first instance, to endeavour to correct a common mistake which arises from an unfortunate confusion in the names applied to these birds.

At all the poultry and pigeon-shows in this country prizes are offered for the best "Carrier pigeons." The birds that compete for and gain these prizes are large birds, with excessively elongated beaks and narrow skulls, and they have growing on the upper mandible and around the eyes a large amount of white carunculated skin, which is known as the wattle. These birds are purely fancy varieties, and they are bred up to an artificial standard of properties. As Homing birds, they are perfectly and utterly worthless, but as fancy birds, difficult to breed to the standard of perfection, they often possess a very high pecuniary value.

The application of the name carrier to them is to be regretted, as you cannot visit a show without hearing some one who is deceived by the name, speaking of them as the true working carriers.

The annexed engraving represents the head of a young bird of this breed; in the old specimens



HEAD OF YOUNG ENGLISH FANCY CARRIER.

the eye and back wattle become developed to a very much greater degree.

In England, previous to the introduction of the Belgian birds, the breed most commonly employed was that known as the Dragon, a bird somewhat like the fancy carrier, but having a broader skull, and consequently more brain, with a greater amount of intelligence, but with a smaller beak and greatly diminished amount of eye and beak wattle.

The amateur who writes under the nom de plume of "Carrier," from whom I have had some most admirable specimens of these birds, writes as follows respecting them:—

"The Dragon is the best English Homing pigeon; it flies lower than the Antwerp, is strong and swift. In this country the expense of training birds for any distance is so great as to stop it almost wholly. Whether the Dragon would equal the Antwerp if it were trained with the same care and for as long a time, cannot positively be answered; but in my opinion, founded upon the known excellence and determination of this bird, it would. It must be distinctly borne in mind that the excellence of pigeons for homing is in an increasing ratio, thus: Supposing fifty average birds, which have all done fifty, are sent seventy miles, and half are lost, the produce of the remainder will be in the long run better homing birds than the produce of those that could not do the seventy miles. Continue this until but two are left; the produce from these would show a better homing average than the others. If this process were repeated throughout scores of generations of Dragons, as it has been with Antwerps, it would ultimately result, in my opinion, in producing a breed of Dragons quite equal to the Antwerps; but to do this, the same care in training and breeding is Selected birds of proved power must always be matched and crossed with others of like goodness; and on no account should birds of known good blood be crossed with unknown or unproved birds.

"The Skinnum is the son of the Dragon by the extinct blue Tumbler bred into a true strain. It flies higher than the Dragon, and is very swift on the wing; it is a lively and gentle bird, very determined, intelligent, and possessed of good homing

powers.

"The courage and love of home of these birds is so remarkable, that good old birds, if kept in confinement and bred from for any length of time, will, when they are let out, leave the place the instant they are all at liberty, and forsake mate and eggs or young to try and find their old home. Many instances are known where a cock and hen from one loft have been shut up thus: the cock has been let out while the hen has been sitting on eggs—this is done because it is well known to be a strong tie to the bird, and prevents all but good ones from leaving; but as soon as he has satisfied himself that his home is to be regained, he has rushed in to the hen, driven her off the nest, and both have sailed away together. Sometimes, after a long absence, the bird finds its old home pulled down, its former owner having removed. It will then hang about the place, resisting all the efforts of the other pigeon keepers to catch it by getting it to settle with their birds and enticing it with food into their traps. It will in some cases starve to death, and often become so weak that if it flies down into the streets to search for food it is too exhausted to fly up, and is taken in the hand. When such a bird appears at a place in this way, neighbouring pigeon keepers know it to be of a good kind, and resort to every artifice to catch it, in order to improve their strain. Sometimes the bird, finding its home gone, will return to the place from which it has been let out, mostly on the second but even on the third day after. The experienced

pigeon keeper lets it rest for a day or two, entices it with a little hemp seed, and again lets it out early in the morning. It is nearly sure to leave again, but does not stop so long, and returns before nightfall. It is then let out daily, and its visits to its old home constantly decrease, until after a few days they cease altogether. If it is liberated at such a distance from its home that it cannot find it, it will suffer equal privation in its efforts to do so.

"Such are some of the peculiarities of the Homing pigeon. No other pigeon will suffer so much for its home; and it is in proportion as the homing faculty is developed that its resolution is shown in the great-

est degree."

There is no doubt that all the English breeds are far inferior to the Belgian "Pigeon Voyageurs," or, as they are often termed in this country, "Antwerps," or "Antwerp Carriers" -here again we have another misnomer, for these birds are not peculiar to the city of Antwerp, but are bred in large numbers in all the large towns in the kingdom; and again, in our own country the term Antwerp is applied to a short-beaked show variety, bred to a certain standard of form, colour, and marking, and that is of little value as a longdistance Homing pigeon. Hence it is as desirable, if possible, to cease employing the name of Antwerp as that of Carrier, and I have therefore used the title of Homing Pigeons as the most characteristic and distinctive, and answering as

nearly as may be to the Belgian title of "Le Pigeon Voyageur."

The present Belgian Homing birds are a composite race, or rather, are of several distinct races. Formerly, a distinct breed, known as the Smerle, was almost solely employed. Smerles are rather small birds, and look very much as if they had been originally bred from a rather coarse blue Owl pigeon, crossed with a Blue Rock. The head is arched, and the skull capacious, indicating a full development of brain, and offering a striking contrast to the flat narrow skull of the English fancy Carrier. The most striking characteristic of these birds is the firmness and great breadth of the flight-feathers of the wings. These overlap each other to a great extent, and afford a strong, firm wing with which the flight is urged. The keel of the breastbone is deep and well covered with strong muscles: and there is altogether an absence of any offal, or large development of any part not used in flight.

In rapidity and power of flying these birds far exceed all our English varieties. I have often enjoyed watching my flight dart off in a gale of wind; and, after seeing them apparently swept away by the blast, witness them come back in the very teeth of the gale with almost the same ease and rapidity as they would have done in a calm.

This power of flight is conjoined with an attachment to home that is not surpassed by that of any other pigeon. I have often kept imported birds for two years—the first year in confinement, the second with one wing of each bird partially cut. At the expiration of the second summer the wings moulted, so that the birds gradually recovered the power of flight, and circled round with the others; and when the complete restoration was effected, I have generally found them leave for Belgium.

The Belgian amateurs do not place the slightest value upon their colour; they match up birds without any regard to uniformity of appearance, and the result is that the Smerles can rarely be depended on for breeding true to the colour of the parents. Speed and endurance are the objects to be attained, and colour is altogether disregarded. There is one colour, however, that finds but little favour with the Belgian amateurs, and that is white. This dislike is not an unreasoning prejudice, but depends on the fact that white birds are more conspicuous as they fly than those of darker colour; and, consequently, are more apt to be destroyed by hawks and sportsmen. Setting whites, therefore, on one side, there is but little preference shown to any colour; and mealies, blues, chequers, blacks, and blue or black pied are all

looked upon with equal favour, if they possess the requisite power of wing to fly with equal rapidity. Some of the flying birds seen in this country are frilled very much like an Owl or Turbit; but I prefer birds without any such irregularity of plumage, as it cannot but interfere with their easy and rapid passage through the air.

As it may be interesting to read another description of these birds, I will translate that of Monsr. A. Lejeune of Verviers, formerly editor of Le Pigéon, Journal colombophile :- "Smerles," he writes, "are the short-beaked pigeons of the province of Liege. They are remarkable for their intelligence, and also for the size of the skull and the well-developed structure of the wings. When two years old, they are capable of returning from Bordeaux to Liége or Verviers (a distance of over 500 miles) in twelve hours, provided the sky be clear and the wind favourable. In bad weather they return the following or the third day. The journeys from Tours (330 miles), Châtellerault (365 miles), and Poitiers (380 miles) are performed by the same birds in eight hours."

A very accurate representation of a blue chequered Smerle, formerly in my possession, is given as the frontispiece.

In addition to the Smerles or Liége birds,

other varieties are extensively employed in Belgium, so that the flying pigeons of that country may be regarded as a very mixed breed. Monsr. André Coopers, formerly Secretary of the Société Libre d'Abéona of Brussels, one of the most celebrated of the Belgian societies, in his small treatise "Sur le Pigeon Voyageur," gives the date of origin of the Pigeon Voyageur of Belgium as about fifty years since, and attributes it to the crossing of the Cumulet of Antwerp with the Smerle of Liége. The Cumulet he describes as being of Flemish origin, with white eyes, and as having the habit of flying so high as to be almost lost to sight for several hours. The Cumulets are also known as Volants or Highflyers: of these birds Mr. Kenrick, formerly of Bruges, writes:-" The true-bred Volants are either black, white, or white with a little red on their necks and bodies. They have even whiter pearl eyes than Tumblers, and the black pupil of the eye is extremely small. They are most extraordinary birds to fly high, and have been known to keep on wing nine, ten, and eleven hours at a stretch. Their heads are not what is termed 'mousey,' but are more elegantly shaped than Tumblers. The best are clean-legged birds, but occasionally they are seen with feathered legs; but these are probably cross-bred. Two birds will fly together as well as a flock, which I do not think is generally the case with Tumblers."

The Smerle Monsr. Coopers states to be of Walloon origin, and having the same dimensions as the Cumulet, only a little shorter, but with a short beak, and often having several recurved feathers on the throat. In flight, he states that it neither rises so high nor flies so long as the Cumulet, but that it is more rapid. Several years after the date above mentioned, he says pigeons were brought to Belgium from England; these were distinguished by their beauty, extreme strength, and large eyes with a white flesh around the eyes and beak. In Belgium, these were called Bec-Anglais, a name they still retain in that country. They are evidently the birds known in England as Dragons. By judicious crossing of these three varieties, writes Monsr. A. Coopers, products were obtained which were stronger and betterorganized than the typical races. and the present Homing bird was thus formed.

This cross was first carried out at Antwerp and Brussels. At Liége and Namur, for several years preference was given to the pure races. But it was not until after this crossed breed had been originated that the long distances now so commonly passed over were flown.

To produce good birds, and to continue the race, judicious crossing, continued to the right

point, is requisite. Monsr. Coopers recommends crossing first a Bec-Anglais or Dragon with a Smerle or a Cumulet; and the products of the cross with the Smerle, when a year old, to be crossed with a Cumulet; or the cross-bred Cumulet and Bec-Anglais to be crossed with a Smerle.

The half-bred Bec-Anglais with a Smerle or Cumulet, is called a Demi-bec. The following generation, bred again from a Smerle or Cumulet, is called a Quart-bec. The Demi-bec is strong enough to make voyages, but not of any very great distance. The Quart-bec, though smaller, is a more excellent long-distance flyer, and may with success be crossed again with Smerles or Cumulets. Although many amateurs breed birds having a little more of the character of one or other of these original varieties named, or of a particular colour, these variations do not affect the good qualities of the race.

The pure-bred Cumulet has been tried in this country, and not found advantageous; but there is no doubt that the habit of high-flying, which it possesses, and which its cross-bred offspring also in great part retain, has been of service to the Homing pigeon. When liberated in a new locality, a bird must rise to a considerable altitude before it can discover any known landmarks; unless, indeed, it flies round in very wide circles: and no sign of a good bird is more

readily recognized by the amateur than a high flight when first "tossed" in a strange locality; but I am inclined to think that a sufficient amount of high-flying has been introduced into the Belgian breeds, and should doubt if a further cross with the white-eyed Cumulet would be of any advantage—an opinion which is borne out by the results of the experiments of my friends Messrs. C. L. Sutherland and A. Lubbock, both of whom have tried recrossing with the Cumulet, but without advantage.

I believe that these high-flying birds are in a great part deficient in the intelligence requisite to make a first-rate Homing bird. It is well known that the celebrated Birmingham Rollers, in despite of their wonderful powers of flight, are not unfrequently lost in large flocks, when let out in a fog or high wind. Such an occurrence could not happen to a flight of good Homing pigeons, for, even if blown away by a violent hurricane, they would return as soon as it had abated

In the different towns of Belgium, and even with different amateurs in the same town, the type of bird varies considerably. Some prefer the Smerle, others maintain that the greater size and strength of the Demi-becs or half-bred Dragons must give them an advantage in the long flights from the south of France. I am

not at all certain that this view is a correct one. A large bird is not necessarily a stronger flyer than a small one.

The Stormy Petrel, that is found braving the tempest "a thousand miles from land," is not larger than a thrush, and no birds have swifter or longer enduring powers of flight than those possessed by the Swallow tribe. The common Swift, when not at rest, is never seen to alight; it keeps on the wing at least sixteen hours in our long summer days, during which time it must traverse a distance probably far exceeding, and certainly not less than, 2,000 miles—and yet its size is far less than that of the smallest pigeon.

It is certain that hereditary-trained intelligence has much more to do with the goodness of Homing pigeons than their size or the exact nature of the variety. The process of "natural selection," or the "survival of the fittest" in the struggle for life, eliminates all the imperfect animals when in a state of nature, and, by a perfectly parallel course of artificial selection, the Belgian colombophiles have got rid of their inferior birds, and are continually breeding, year after year, from those that have performed the longest journeys in the shortest space of time. If a stranger wishes to know the value these experienced fanciers put upon their best birds as

breeding stock, let him visit, as I have done, the Belgian lofts in the spring, and hear £10 or £12 refused for a single pair of birds; and if still pressed to sell, listen to the remonstrance of these genuine colombophiles:—"Do not ask us to sell our best birds, we do not like it, but wait a couple of months, and we will give you plenty of young ones."

This process of selection of the best stock is continually being carried on. Each pair of old birds will breed seven or eight young ones every season; of these, let us regard five or six as being reared, and ask what becomes of them.

The very worst are lost in training; the weakest are struck down by the hawks; the slowest, those that return, but not in good time, find their way to the dealers; and, during the summer season, thousands weekly are shot at the pigeonshooting clubs in this country, where aristocratic gunners stand with double-barrelled guns, twentyfive yards from the traps, and think they are worthy of the title of sportsmen if they succeed in butchering their prey in this ignoble manner. I am no maudlin sentimentalist: I know that Nature is prodigal of life, and that of every twenty pigeons born, not more than one can be allowed to arrive at maturity, and increase its kind, or the world would soon be overstocked with pigeons, but this does not increase my respect for their slayers.

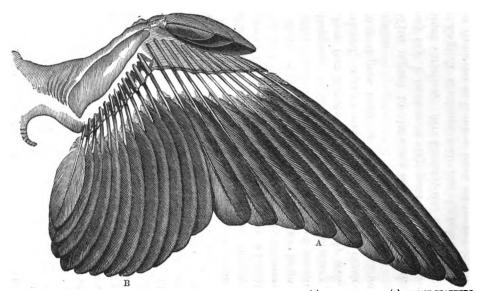


FIG. 1.—UNDER SURFACE OF LEFT WING OF WILD PIGEON, SHOWING PRIMARY (A) AND SECONDARY (B) FLIGHT-FEATHERS-

I believe the best possible use you can put a deliberate murderer to is to hang him, pour encourager les autres; but this belief does not raise the hangman to the dignity of a gentleman in my estimation; nor can I see any more true sport or manly dignity in the performance of a languid swell who backs himself to kill forty-five pigeons out of fifty, his valet-de-chambre loading his gun, than in that of the vulgar snob who wagers that he will kill and dress a dozen sheep in less time than any other butcher—gambling, not sporting, is the aim of both.

This process of selection having been universally followed by the Belgians, has eventually produced good birds of various types, all having, however, the common characteristics of a large brain, and consequently a capacious brain-case or skull, a well-developed chest, with large pectoral muscles to move the wings, and broad overlapping flight-feathers, the ten primary feathers (see Figure 1), being exceedingly well developed, so as to overlap each other to a much greater degree than in any of the ordinary varieties.

With regard to the exact shape of the head, I may say I have seen very good birds of very distinct varieties. Mr. Christy, one of the very few English amateurs who has had birds fly from Antwerp to London, has a celebrated strain that are rather thin or "spindly" in the beak. I have this season been trying some of the young birds from the strain of this gentleman, and find them exceedingly sharp fliers, and very good homers. The birds of Mr. Sparrow, of the London Pigeon Club, whose birds have been well tried in the Exeter matches, on the contrary, are rather thick or chuckle-headed; and Mr. Kenrick has some of the best Belgian birds that again are intermediate, as it were, between these two extremes, and the birds that I have had from this gentleman have done exceedingly good work.

Having given an account of the origin and varieties of the Homing pigeons, I may probably be expected to state to the novice the best mode of getting together a flight. It is obvious that endeavouring to commence by buying old birds, and turning them loose after a short confinement, is a hopeless proceeding, as, if worth anything, they would return to their old home at once.

If old birds are bought, they must either be turned into a well-lighted, well-ventilated room or aviary, and allowed to breed, or they may be "cut down," so as to prevent their flight. This latter plan can only be advantageously had recourse to where the birds are in an enclosed yard or garden where cats are unknown, as, if cut-down birds are allowed their liberty on

the top of a house, they are certain to come to grief. The best way to cut down a bird is to strip with a pair of scissors the shafts of the first seven or eight primary flight-feathers of one wing: this renders the bird one-sided in action, and it cannot fly.

When properly cut, the shafts of the feathers should look like bare poles, when the wing is extended; at other times they are under the secondary flight-feathers, and do not show.

The wing-feathers in no case should be cut across, as the sharp edges of the stumps injure the plumage of the bird.

The difficulty of obtaining really good old birds is great; amateurs will not sell their old favourites that have been flown many long distances, and that are always to be depended on. After the end of the summer, a good many real Belgian voyageurs that have been lost in the concours may be picked up at Barber's, Hammond's, or Offer's, and the other dealers who supply the pigeon-shooting clubs; but these are either birds that have flown to strange places and been captured, or "slow coaches" that have been drafted out of good strains. The crême de la crême cannot be bought for a few pence in this way.

The most desirable mode of obtaining good birds is to be peak young ones from those who have surplus stock to spare: these should be taken as soon as they feed themselves; and if there are any common pigeons about, there is no difficulty whatever in reconciling them to their new location, especially if they are taken from their birthplace before they have acquired strength to fly round.

If the young birds have been allowed to fly even for a few days, a little tact is necessary to settle them in their new home. They should be confined for a day or two in such a manner as to become accustomed to the place, and if they can see the neighbourhood from their prison, it is preferable; they may then be liberated in the evening after an ample meal, when they have but little inclination to fly. If they appear very wild, the flight-feathers of one wing may be thoroughly saturated with water by holding it extended under a small stream from a tap; this temporarily prevents the bird flying, and before the wing dries, the impulse to fly away that the young bird has on regaining its liberty has passed.

If thought desirable, the bird may be brailed, according to the practice of falconers, for a couple of days, the brail being taken off at night to prevent the wing becoming stiff.

To brail a bird, two pieces of string or tape of equal length are to be taken and tied together, as shown in the lower figure, so as to form a central loop with loose ends, which latter should be much longer than represented by the draughtsman. The loop must be of a size proportionate to that of the wing of the bird. When used, the loop is passed over the fore part of the wing, and one set of loose ends are brought up behind, between the wing and the body, and

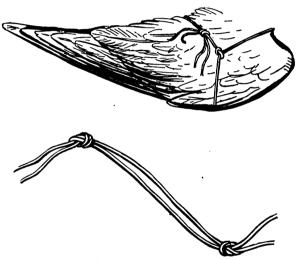


FIG. 2 .-- WODE OF BRAILING A BIRD.

secured by being tied to the other set, as shown in the upper figure. If this is properly done, there will be no pressure on any part of the wing, nor need a single feather be ruffled or deranged; nevertheless flight is entirely prevented, as the bird has no power of expanding

the wing. Of course it is very desirable to secure both wings. When this is done, the wildest bird may be safely placed on the ground, where it can run about freely, but without the least power of flight.

Should a bird be confined a long time in this manner, it is necessary to loosen the wings alternately, otherwise a stiff or contracted joint would ensue.

CHAPTER III.

MANAGEMENT OF HOMING PIGEONS.

Homing pigeons being the most hardy and vigorous of all breeds, do not require any special care in their management, but the triangular pigeon-houses placed outside walls or those elevated on poles are not at all suited to them; they should be placed in a room or loft in which they can be secured when required by their owner.

For the arrangements of the lofts and breedingplaces, I cannot add anything of importance to what I have already given in my larger work on Pigeons,* from which the following chapter on the management of the birds is chiefly abstracted, with some especial additions having reference to the Homing birds.

In arranging a pigeon-room in a loft, it is very desirable that it should not be deficient in light. A dark room is not healthy for the

^{• &}quot;Pigeons; their Structure, Habits, and Varieties," by W. B. Tegetmeier, F.Z.S. With Coloured Plates by Harrison Weir. London: G. Routledge & Sons.

birds, and can hardly be as well cleaned as one which is well lighted. Moreover, the owner is not able to see his birds conveniently, or to examine the nests when required.

Another point, of the highest importance to the health of the birds, is the establishment of a good system of ventilation. Nine-tenths of the diseases that afflict pigeons arise from their being crowded together in dark, dirty, ill-ventilated lofts. An absolute draught of wind rushing through the loft is not desirable, but full provision must be made for ventilation, if healthy birds are desired.

Cleanliness in the pigeon-loft is no less essential than ventilation, particularly if many birds are kept. The loft should be cleaned out daily; and under no circumstances should the dung be suffered to accumulate until it becomes offensive to the smell.

Fresh gravel, sand, or dry earth should be thickly strewn on the floor every day, and the dung that accumulates in the nest-boxes and around the nest-pans not suffered to collect so as to be offensive. The most convenient instrument for cleaning the shelves will be found to be a small hoe fixed on a short handle about eight or ten inches in length.

Pigeons are often kept in lofts, under the tiles or slates of a house. In this case the

rafters should be properly boarded over, otherwise the dung which falls upon the laths is with difficulty removed.

It is requisite that the loft or room devoted to pigeons should be proof against the ingress of cats and rats. Strange cats are most destructive to pigeons. When a cat has once tasted pigeon, she seems to prefer it to all other food. Sometimes the access of a cat can hardly be prevented, and it may be necessary to get rid of the intruder to prevent the entire loss of the stock. A box trap baited with a pigeon's head will be found to be invariably successful in the capture; after which pussy may be shaken into a bag, which may then be placed in one pailful of water and pressed down with another.

Laying poisoned meat for any animals is now illegal, and, moreover, if arsenic is employed to destroy cats, the proceeding is attended with much cruelty, as they immediately reject the poison by vomiting, and only retain sufficient to produce violent and painful inflammation of the stomach without killing them. If poison must be had recourse to, a little carbonate of baryta, mixed up with the soft roe of a piece of redherring, is the most certain and speedy that can be used. Rats are no less injurious than cats, and must be got rid of at all hazards. Traps, phosphorus paste, a trained cat that has been

accustomed to pigeons from the first, may all be had recourse to.

Ingress and egress to and from the loft should take place through a cage, technically termed an area, Figure 3. This is usually fixed outside

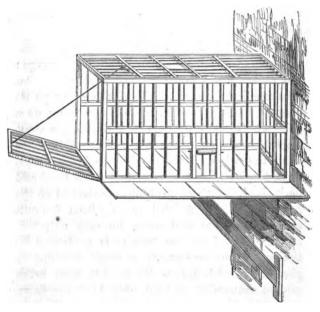


FIG. 3,—AREA FOR PIGEON-LOFT.

a window on a platform, supported by oblique struts. This area may either be constructed of laths or wires, and should have a falling door, to which is attached a string capable of being pulled from the inside, so as to close the entrance. It not unfrequently happens that some birds may be shut out when the door is pulled up; and in order to give these free access to the loft when the area is shut, two contrivances are used. One or more square holes, called dropping holes, are constructed in the top of the area, through which the pigeons can readily pass into the area, but out of which they cannot possibly emerge: the other is the bolting wire, Figure 4. An aperture is left in the side of the area: at its upper part is fixed a small roller, turning on a wire which passes through it, and into the stout laths that are on either side. From this roller hang two wires, placed nearly two inches apart, so as to give a pigeon space to put his head and neck through: these are quite unattached at the bottom, so that the bird pushing from the outside raises them and gains an easy entrance. But his exit from the interior is prevented by the wires resting against a small beading or piece of wood below, which hinders their being pushed outwards. Where many birds are flown there should be several bolting wires in each side of the area.

These two simple contrivances are of great service; they prevent birds from being shut out at night, when they would often fall an easy prey to cats, give them at any time free access to the loft, and save the owner from much anxiety and trouble. The birds learn to avail them-

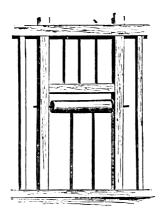


FIG. 4. -- ARRANGEMENT OF BOLTING WIRES FOR AREA.

selves of these means of ingress with the utmost readiness.

The breeding-places or nesting-boxes are of two kinds; in rooms that are rather crowded, shelves are generally placed around the walls, and the spaces between them are usually divided by upright divisions, placed not less than three feet apart, so as to form pens or breeding-places for the different pairs of birds. The distance between the shelves should not be less than a foot or fifteen inches. The ends of each pen should be boarded, so that the centre only is open; this arrangement offers several advantages; the bird in the nest, which may be formed at either end, sits concealed and undisturbed—a state of things that greatly conduces to success in hatching; and by hanging a piece of wire or lath-work before the open centre, the pen is capable of being closed, and the birds kept confined as long as may be desired.

The arrangement of having a darkened nesting-place at each end of the pen is very advantageous, as during the summer a pair of birds will often wish to go to nest before the last hatched young are able to fly or feed themselves. When this is the case, a second nest-pan may be put into the other end of the pen, when the birds will lay again, and thus rear a pair of young and hatch at the same time.

When there is more room, and the birds are not so numerous, nest-boxes placed on the floor of the loft will be found advantageous.

When nests are placed upon the floor, breedingboxes for the concealment of the nests are very desirable. They should be made without bottoms, so as to slip over the nests. One very convenient form is shown in Figure 5. It consists of three sides of a cubical box, and half of a fourth, the bottom and side next the wall being absent. This is placed over the nestingpan, and admits of being lifted off in an instant, either for the purpose of observation or for cleaning around the nest. One advantage of this form is that the cock bird usually takes his

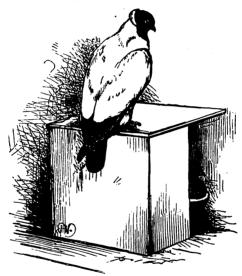


FIG. 5. - SQUARE NESTING-BOX ON THE FLOOR.

station over the nest of his mate, and thus does not interfere with the birds belonging to other nests, nor permit any intrusion on his own.

Another form of nest-box is even still more simple. It is formed, as shown in Figure 6, of an oblique or slanting board resting against the wall; this is supported by a piece behind, not seen in the drawing, and a half piece in front; thus a convenient shelter for the nest is formed. It is always to be borne in mind that



FIG. 6.—SLANTING NEST-BOX.

pigeons invariably prefer a concealed and snug retreat for incubation to any open place that may be afforded them.

For the nests, I know of no contrivance so advantageous as the coarse earthenware saucers known as nest-pans. These are formed usually of rough red earthenware, and are best if made of the shape shown in Figure 7. In size, the pans should be seven or eight inches in diameter. They should be made heavy, so that they are not likely to be overset by the old birds resting on the edge. The advantages of nest-pans over all other contrivances of the kind are very great. They are superior to boxes or baskets, on account of the slight harbour they afford to vermin, and

the ease with which they can be cleaned by scalding with boiling water. Then the facility they afford for examining and shifting the young birds should not be lost sight of. They are much cleaner and more healthy in use than any other contrivance that can be employed. When the nestlings are very young, if the pan becomes wet, a handful of dry sawdust or bran speedily absorbs all moisture, and the nest becomes dry



FIG. 7.-EARTHENWARE NEST-PAN.

and wholesome; and as the young become stronger, the dung is ejected over the sides of the pan, and the nest remains unsoiled. Some persons object to their employment, thinking that they are apt to chill the eggs; but we never experienced that evil, and they are readily made warmer by a little cut straw or sawdust being placed within them.

When nests are made on the ground, some persons place a few bricks around them, to prevent the eggs being rolled away; but the plan is far inferior to the employment of the nest-

the wall; this is supported by a piece behind, not seen in the drawing, and a half piece in front; thus a convenient shelter for the nest is formed. It is always to be borne in mind that



FIG. 6.—SLANTING NEST-BOX.

pigeons invariably prefer a concealed and snug retreat for incubation to any open place that may be afforded them.

For the nests, I know of no contrivance so advantageous as the coarse earthenware saucers known as nest-pans. These are formed usually of rough red earthenware, and are best if made of the shape shown in Figure 7. In size, the pans should be seven or eight inches in diameter. They should be made heavy, so that they are not likely to be overset by the old birds resting on the edge. The advantages of nest-pans over all other contrivances of the kind are very great. They are superior to boxes or baskets, on account of the slight harbour they afford to vermin, and

the ease with which they can be cleaned by scalding with boiling water. Then the facility they afford for examining and shifting the young birds should not be lost sight of. They are much cleaner and more healthy in use than any other contrivance that can be employed. When the nestlings are very young, if the pan becomes wet, a handful of dry sawdust or bran speedily absorbs all moisture, and the nest becomes dry



FIG. 7.-EARTHENWARE NEST-PAN.

and wholesome; and as the young become stronger, the dung is ejected over the sides of the pan, and the nest remains unsoiled. Some persons object to their employment, thinking that they are apt to chill the eggs; but we never experienced that evil, and they are readily made warmer by a little cut straw or sawdust being placed within them.

When nests are made on the ground, some persons place a few bricks around them, to prevent the eggs being rolled away; but the plan is far inferior to the employment of the nest-

pan. In some parts of the country there may be some difficulty in getting these simple appliances, but as they can be made by any brick, tile, or coarse earthenware maker, they should be accessible anywhere.

Another appliance, very necessary to the health and comfort of the birds, must not be overlooked,—that is the washing-pan. Pigeons are not dusting-birds, like fowls, but, on the contrary, cleanse themselves by washing; they are fond of lying down in shallow pools of water, expanding their wings, loosening the arrangement of the feathers, and then, when the plumage is well-nigh saturated, they give a vigorous shake, and the water at once becomes quite white and milky with the scurf thrown off from the skin of the bird.

Milk-pans answer very well for the purpose, but any broad, open vessels, capable of holding three or four inches' depth of water, will answer equally well.

As it is sometimes necessary to capture the birds during the day-time, a common cheap landing-net will be found a very useful article in the pigeon-loft, as by its use a single bird can be readily caught without driving the others about and frightening the sitting birds off their eggs and young.

A supply of drinking-water is at all times an

essential requisite. Pigeons are very thirsty birds, drinking a great amount of water, therefore a good supply is required. This is especially the case when the young are being fed, as, after picking up a cropful of corn or pulse, the old bird has to take a copious draught of water before it can disgorge it into the throat of the young.

The old fanciers used to employ a large bottle filled with water, and then inverted into a saucer; but the contrivance is somewhat clumsy, and the common earthenware or metal poultry fountains will be found far more convenient in use. Many fanciers, who are particular about the food of their birds, care but little respecting the water given them. Too much stress cannot be laid on the fact that a supply of pure, clear drinking-water is absolutely essential to the health of the birds. Often have we heard the owner of valuable pigeons bewailing his misfortune in losing so many by sickness, and when we looked at his drinking fountains we found that they contained water contaminated with filth, the presence of which quickly explained the diseased condition of his stock.

Another very necessary appendage to the loft is a mating or matching-up cage.

A very useful mating cage is represented in Figure 8; it is merely an ordinary pen or

cage with an open wire partition separating the two birds; the cock is placed on one side, the hen he is desired to pair with on the other. It is desirable to remove this pen from the loft,

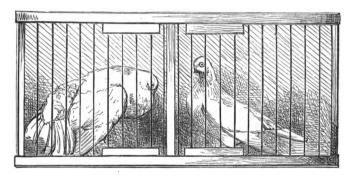


FIG. 8.-MATING OR MATCHING CAGE.

and out of the sight of other birds, when the cock will be seen in a day or two making advances towards the hen; they may be then placed together, and as soon as the cock is seen calling the hen to nest, they may be regarded as paired, and returned to the loft.

One evil should be strongly guarded against in the loft, namely, a superfluity of male birds, as odd cocks are constantly persecuting the hens that are mated, driving them off their eggs, and causing much fighting and turmoil. If there are too great a number of hens, the evil is much less, as a pair will often mate together, go to nest, and lay and sit on four eggs, and, what is still more extraordinary, sometimes two cocks will match together in the same manner, and build a nest. If a pair of good eggs are given to them, they will even sit on the eggs, and hatch and rear the young, in the same manner as if they were a pair consisting of cock and hen.

I once had a pair of Smerle cocks that were mated for two seasons, and reared several pairs of young from eggs laid by other birds. The third season one was shot, and the survivor then mated with a hen and bred some exceedingly good Homing birds.

With regard to the food of the birds, I prefer a greater variety than usually employed. The London fanciers are strongly in favour of very small beans, regarding them as superior to all kinds of food. Gray peas are also extensively used. Whatever variety is employed, care should be taken to select old samples, as new peas, beans, or tares, are almost certain to purge. The smaller kind of Indian corn or maize is frequently used, and with great advantage in winter, but it is too fattening for use during the Homing season.

When pigeons are flown they become much

more hardy than if confined to a loft. Under these circumstances so much care need not be exercised in the choice of their food: barley, tail-wheat, and even coarse rice, may form part of their food without danger. Pigeons flying in the country find a considerable portion of their own food, and even when an unlimited supply of pulse and grain is afforded them: they pluck off the small seeds of grasses, and eat a quantity of green vegetables, that greatly conduce to their well-being. In the crops of the wild Rock Dove, numerous small snails are almost always to be found; and pigeons that have their liberty may often be noticed flying to the grass fields after a shower of rain, to pick up the smaller snails that are brought forth by the wet.

Believing that we cannot do better than follow the natural instincts of the birds in the matter of their food, I always strive to vary their dietary as much as possible.

It should be borne in mind that pigeons are derived from the Rock Dove, a bird frequenting the sea-shore, and drinking the salt water of the pools left by the retiring tide. This may account for their fondness for salt—a natural instinct that it is most desirable to indulge. They also require calcareous matter to furnish the materials of the egg-shell. I endeavour

to supply both of these desires at one and the same time, by mixing a little salt with a quantity of old mortar rubbish, and placing it where the birds can gain easy access to it.

If mortar rubbish is not accessible, a few oyster shells may be burned, so as to render them brittle, and then powdered up, with the addition of a little salt. So fond are pigeons of salt, that they will peck at any substance containing it. Many fanciers refuse to give their pigeons any salt, but it is difficult to believe that the gratification of so strong a natural instinct should not tend to the advantage of the birds.

In Belgium the softer red burnt loam from the brick-fields is generally given to the birds in their lofts, and they appear exceedingly fond of it, eating large quantities, but whether it is advantageous as a substitute for grit, or on account of the iron it contains, I am not certain.

CHAPTER IV.

THE TRAINING OF THE HOMING PIGEON.

HAVING discussed the general management of the Homing pigeon, we have next to consider the right method of training necessary to enable it to return long distances with the greatest degree of certainty and rapidity. For my own part, I am favourable to commencing the education of these birds at a very early period, believing that their faculties of observation, as well as their powers of flight, are capable of being highly developed by judicious exercise.

At the same time, I am equally opposed to overtasking the energies of immature birds. In the case of every young animal whose framework is not perfectly ossified, and whose muscular system has not arrived at the firmness that is coincident with mature development, exercise should always stop short of actual fatigue. Whilst, therefore, I would take care that the brain and the muscles of my young birds should be duly exercised, I would avoid any severe distances; and in this my opinions are quite

borne out by the experience of the best Belgian amateurs.

When the pigeons are between two and three months old and fly round strongly, I send them their first journey, say a mile distant, to some open place, if possible, where there are no houses on which they can alight, as I object to seeing a young bird settle on a house when first tossed, and so acquire a bad habit. The next toss may be double the distance, and the following double that again, so that flights of one, two, four, eight, and sixteen miles are the distances my young birds are generally taken in succession. After that, ten miles a stage in any required direction is to be regarded as very steady work; which, however, would be laughed at by the Belgian colombophiles, who train much more severely.

If the young birds are not well trained during their first season, it is exceedingly desirable to give them as much exercise as possible; and this is best accomplished by letting them out separately from the old birds that are at nest, when they will fly around and be sometimes out of sight for an hour or two; whereas, if there are any old birds with them, and these are at nest, they will return after a very short fly and bring the young ones with them.

In practising for their races, as well as in the races themselves, the Belgian amateurs adopt

methods very different to those followed by the pigeon-flying men in this country. In Belgium the birds are all trained together, and at the final race they are all liberated together. In England, every competitor in a pigeon-race trains his own birds, and in the final struggle they are usually liberated with a distinct interval of time, so that no one of them shall accompany another in the return journey. It will therefore be desirable to give distinct accounts of the modes of training followed in this country and in Belgium.

For the details of the plans adopted in the latter country, I cannot do better than have recourse to the information contained in "Le Pigeon Voyageur." In this work Dr. Chapuis recommends what in England would be regarded as rather severe training in selecting the young pigeons to fill up the vacancies left by the loss or death of the old ones. He justly says that, although a pigeon at first sight may appear good, it may, nevertheless, have some defect which renders it useless. By observation we can tell whether the wings of a young pigeon are well formed, but we cannot thus learn whether it has good sight, or whether its faculties are well developed; whereas the trials to which the young bird is subjected will soon satisfy us on these points.

A pigeon two or three months old, counting from the time when it leaves the nest, may be trained; but Dr. Chapuis thinks it is preferable to wait till it is five or six months old; and, in actual practice, it is the pigeons hatched in March, April, and May which are subjected to these trials, which take place towards the end of August, or in September. A first flight of five to eight miles is flown; the second, three or four days after, will be double the length. In this manner, in five or six trials, a distance varying from 150 to 180 miles will be arrived at as the length of the flight, beyond which it is not desirable to train young birds of the current year.

These trials are amply sufficient, for the worthless pigeons will be lost on the road, and the best will have shown their rapidity and excellence. A bird in training, which has allowed itself to be constantly distanced, ought not to be kept, although it is possible that it may improve, as it happens sometimes that a pigeon for several years does not distinguish itself, and all at once gains several prizes; but in general the best birds may be chosen after the early trials. A very good pigeon shows its superiority as well in its youth as at a more advanced age, and it is bad policy to retain ordinary birds, as the strain is not improved by so doing.

In certain localities in Belgium, writes Dr. Chapuis, the young pigeons are more severely exercised in the races, which commence in the month of July; these increase progressively in difficulty, till at last the pigeons are made to fly from 300 to 400 miles, but that the breed becomes the better for this severe early work is very doubtful. A pigeon does not come to full strength till it is three years old. If in its youth it has been subjected to too severe exertions, it becomes easily exhausted; and at the age of four or five years, when it ought to possess its greatest vigour, it begins to decline.

Dr. Chapuis much prefers the system of those amateurs who, during the first year, give their young pigeons only comparatively short trials, and not even until the third year send them to make journeys of 300 to 400 miles; but it should be remembered that a distance that the Doctor regards as a short one, would be thought a severe trial for a young bird in this country.

In Belgium various plans are followed with regard to the training of the young pigeons of the year by the different societies, but it is an almost universal rule that the pigeons of four or five years old, after three or four shorter flights, should make the journey from Paris to Belgium before being sent to any place farther south. When the weather is favourable, this journey of 190 miles he regards as mere play for the pigeons, but if the wind is contrary, or circumstances are unfavourable, it may overwork them, and so be prejudicial when the day of the great contest comes—a day on which each bird ought to possess all its physical strength.

The following is an abstract of Dr. Chapuis' conclusions as to the conditions under which a pigeon is best fitted to take part in the long-distance concours:—

For the great races that take place in the second half of the month of July, it is desirable that the moulting of the birds should be retarded as much as possible. Indeed, at this time one frequently sees many pigeons which have only three or four of the largest winged feathers to lose. This condition is to be lamented on two grounds: first, the absence of a large feather is more unfavourable than that of a small one, the long feathers increase in length from the inner to the outer ones, so that the second is more important than the third, and so on; in the second place, when the pigeon has arrived at the stage of its moult that there are only three or four feathers left, it is on the point of losing its scalpulary feathers and its wing-coverts; the fall of these last constantly takes place in a rapid manner, and it may be so much accelerated by the short imprisonment of the birds in the baskets in which they are carried, that when they are set at liberty they may be found entirely deprived of an important instrument of flight. By chance a bird far in advance in its moult may succeed in gaining a victory, but such cases are exceptional, and will occur more rarely the more laborious the flight. A pigeon which has only commenced its moult, and has lost but three or four of its feathers, possesses a wing without gaps, and is in more favourable condition.

The majority of fanciers have more confidence in male than in female birds; ordinarily, threefourths of the birds employed in a flight are males—not that females are less faithful or less rapid than males, but because they are less often in good condition. For example, it is known that at the approach of the time of laying, and also during the two or three days which follow it, it is dangerous to employ a female. If she lays her eggs in the basket in which she is carried, the state of weakness in which she arrives will cause her to fail in the contest. the same way the female, being more employed in hatching than the male, perceives sooner the movements of the young pigeon in the egg; she feels that the time of coming out of the egg

draws near, and prepares in consequence; the glands of the crop swell and secrete the milk which she gives to her little ones in the first days after their birth. If at this moment she is taken away to be shut up for several days in a basket, she will become ill, will cease to eat, and in all probability will be unable to regain her home. This last circumstance is also unfavourable in the case of the male bird, because he disgorges the same kind of milk for his little ones.

It is also necessary to watch that the pigeons should not exhaust themselves in rearing too many young; as a rule, only one young pigeon should be allowed to those parents that are about to take long flights.

Thus, during the two or three days which precede or follow laying, and also the hatching out of the young, the female must not be employed; nor must the male during the three or four days which follow the hatching. It is often in the power of the amateur to defer the occurrence of these unfavourable circumstances. As the day of departure is known a long time beforehand, he may, by taking away the young, accelerate the period of a new laying, and also, a day or two before the hatching out, he may place a young pigeon of three or four days old in the nest, so that the parents may disgorge the soft food which fills their crops.

Besides the times indicated above, the question has been much agitated whether pigeons ought to be flown while they are sitting, or when they have young ones less than eight days old.

When the day of the contest arrives, the pigeons intended for the struggle must be caught in order to be sent to the society, where they are to be stamped. The operation of catching the pigeons in a closed house appears very simple, and few people would imagine that it could be made an object of discussion. The plan of catching the pigeons by means of a small net is rarely used in Belgium.

As a general rule, more can be got from animals by affection than by cruelty, and pigeons are no exception to this. When an amateur takes care of his birds himself, and never frightens or drives them, the pigeons know him, and will allow themselves to be taken with the greatest facility.

But all amateurs have not the good sense or the leisure to tame their flying birds to as great an extent. To catch their birds more easily, some amateurs have their pigeon-house divided by a movable partition, so that they can get their pigeons into a narrow space, and in a few minutes their choice is made. Others shut out the light from the pigeon-house, when the pigeons remain motionless. It is then easy to catch them without the risk of pulling out any feathers, or even of ruffling them. The plan of capturing them on the previous evening is by far the best plan, for too many precautions cannot be employed, as a pigeon is rendered unfit for the contest simply by breaking one or two of the important flight-feathers.

When the competitors are shut up in a basket, it is well to pass them in review, and to make sure of the state of their wings. Attention should also be directed to the feet, in order to free them from any hardened dirt which may adhere to them. The feet, particularly those of large pigeons, often collect dung, which becomes hard in the pigeon-house.

This weight may influence a pigeon in its flight, and therefore attentive amateurs pass the finger, soaked in oil, over the lower surface of the bird's foot, so that excrements may not adhere to it.

The birds which are flown at a distance are accompanied on the railway by a person, the convoyeur, who looks after them on the road, and supplies them with food and water; but at other times the boxes are addressed to the station-master, or to the mayor of the town which has been selected as the commencement of the return flight; a label is fixed to the baskets, requesting the railway authorities to supply

water to the birds, to give them some of the grain sent in a bag for that purpose, and liberate them at the time appointed; but the cost of sending a man with the pigeons is considerable, and therefore some amateurs avoid them by directing the birds to the station-master. After making trial of both plans, and weighing the advantages and drawbacks of each, the balance, at least in Belgium, seems to be in favour of the plan of employing a convoyeur to take charge of the birds. When the pigeons are addressed to the care of the station-master, it is a rare thing for them to be flown at the time desired. The baskets with the birds may remain neglected in the station; if rain comes on, the pigeons become wet; the dung which covers the bottom of the baskets dirties their plumage, and may clog their wings to so great an extent that half of the birds may find it impossible to perform their flight.

On Sundays, in favourable seasons, three or four hundred baskets may arrive at the same station; this overwhelming amount of responsibility puts the railway people in a bad temper; the baskets are tossed about; if they fall they are allowed to remain on one end, and the pigeons are heaped up in a corner one upon the other, and occasionally baskets of pigeons are sent entirely wrong and lost. English fanciers have but a very incorrect idea of the extent to which

pigeon-flying is carried in Belgium. Not unfrequently the railways convey to Paris and Orleans, from the various towns in Belgium, nearly 500 baskets of pigeons in one day. And not unfrequently on Sundays not less than thirty thousand pigeons are sent from Belgium to be liberated at the different stations of the Paris and Orleans Railway.

The exact details of the training of the birds for a long Homing match are given in the following letter from Mr. Kenrick, who, writing from Bruges, some three years since, states:-"Our society here flies every year for prizes. This year the birds are to be flown from Bordeaux, 567 miles from Bruges. The following are the stages, and the dates on which the birds are to be let off: Thourout, 11 miles from Bruges, is the first stage; the birds are to be thrown on May 7. The next stage is Rumbeke, 21 miles, date May 10. Then follow in order Korbryke, 32 miles, May 14; Douai, 69 miles, May 20; Amiens, 123 miles, May 27; Paris, 204 miles, June 3; Blois, 317 miles, June 16; Angoulême, 484 miles, June 29; and finally Bordeaux, 567 These are the stages for mature birds. The young birds bred this year will not be put in training until July, and be only flown as far as from Paris."

For the English system of training, I may

quote the writer of some very good articles in Bell's Life. He describes it as follows:—

"In the first place, it must be ascertained that the young birds are in a healthy state; then they must be made well acquainted with their home by flying twice a day round their dwelling-place; after which toss them up a short distance, say a mile, from their home. From this time the distance should be gradually increased, say two miles at a time, up to ten, for if it is attempted to train them too rapidly, or by too long stages, many birds get lost, whereas by careful training and a proper feeding fewer birds get 'dropped.' The birds must be kept, while in training, in as direct a line as possible, and after they have done ten miles in a satisfactory manner, they can venture fifteen, then twenty, and so on, by stages of five miles, until the required spot is reached. They will soon get thoroughly acquainted with all the conspicuous landmarks, but first season birds should never be expected to accomplish much over fifty miles, which they will do well; but in the second season, when they have acquired full development and experience, a liberty can be pretty safely taken with them."

The same writer goes on to state that—

"The system of training in Belgium is similar to our own, with the exception that they do not commence to train the young birds before July, and after they have done 60 or 70 miles, they are allowed to rest until the second year, when they are trained on to 250 miles; but in the third year, when they have acquired full development and experience, they are expected to fly 500 miles. First season birds are sent very short stages at the commencement of their schooling; but when they return with rapidity they

are sent full five miles each journey, although they are seldom thrown up more than two days in the week. Old, or second season birds that have been thoroughly trained when young, are sent each time much longer stages; but the general average is 10 miles, until they have completed 100 miles, after which the stages are from 15 to 20 miles. At 200 miles the stages are considerably lengthened, from 25 to 30 being frequently given; and after 300 miles have been accomplished by the birds to the satisfaction of their owners, they think nothing of sending their birds 50 miles each journey. They, however, never attempt more than one long distance in eight days. About thirtythree years ago, a society at Antwerp gave a valuable prize for pigeons bred in that country, to fly from London Bridge to Antwerp. A hundred and ten birds were entered for the prize, and £100 was laid that the first bird that reached Antwerp did not accomplish the journey in five hours. The birds arrived in London on Saturday, in charge of several fanciers, from Antwerp, and they were immediately taken to Frank Redmond's, a celebrated fancier, then living in the Borough, and turned out into a large room. On the following Monday morning, at eight o'clock, they were all set at liberty. It was a lovely morning, and particularly bright and clear, with a slight but favourable wind. Immediately the birds got well together they rose in the air an immense height, and in a compact body went straight away down the river. The first bird—a blue chequer—arrived home at five minutes after one, but though he gained the prize the bet about time was just lost. The distance was 180 miles, and about thirty birds were lost in this fly."

This race from London to Antwerp was thus graphically described by the late Mr. Wheelwright (the Old Bushman):—

"I recollect many years ago-I believe it was about the first time that these Antwerp birds (or, as the fanciers of the day styled them, the 'Twerps') ever were seen in England-that one hundred and ten of them were brought over to London to fly back to Antwerp, for a prize given by a Columbarian Society there, and a bye-bet, the conditions of the match being that the first bird was to reach Antwerp in five hours. At that time my old friend Frank Redmond (who then stood high in the pigeon fancy), kept a public-house in the Borough. It was to his house that the birds were brought, and from there they were tossed. It is now more than thirty years since; and as I write from memory I may make a mistake in some of the minor details of this extraordinary match, but in the main particulars I am right. the first place, I believe that not one of these hundred and ten birds had ever been up the Thames-I do not think ever before on British land, although doubtless they had been tossed at sea. They came over shut up in large close baskets. They arrived in London on the Saturday afternoon, and were all directly turned out loose into a long room at Redmond's. Of course on the Sunday these little strangers had numerous levées of the London fanciers to visit them, and were scrutinized by the humble partisans of pigeon-flying with as much curiosity as the first favourite for the Derby is by his most aristocratic friends as he strips for that great event. I remember the impression against them was unfavourable, for they had very little in common with the heavy English Horseman. But two properties struck all—the extraordinary strength of the flight-feathers, and the snake-like look of the head and neck. The principal colours were blue and chequered, although there were a few mealies among them. They were tossed on the Monday morning, and as the Borough clock boomed out the hour of eight the whole lot went up.

The morning was bright and clear, and the wind, which was but moderate, blowing down stream. The birds rose in the air in a compact body, went right over the river, gradually rising higher and higher as they swept above the city, and when they were lost to view appeared to be heading down the northern bank of the river. Several flights were out that morning floating in the air, but these little hardy Dutch adventurers took not the slightest notice of the English birds; and the shrillest whistle and 'whoop strays'-which no one but a true London fancier can give-would not have called one of them down, or delayed them one minute, when starting on that perilous journey. The match was lost by five minutes, the first bird reaching Antwerp at, I believe, five minutes after one, thus having done the 180 miles in five hours and five minutes. Stragglers kept dropping in at intervals during the whole afternoon, and ten or twelve were lost at sea."

It is often stated that the longer distances performed by the Belgian birds are owing to the mode in which they are trained and flown. Thus Mr. J. Fletcher, who has had birds return from Plymouth to London, writes:—

"In the first place, the atmosphere is much less clear and bright here, thus causing the birds much more labour; secondly, Belgium is very flat, therefore the birds can observe an object at a greater distance than ours can; thirdly, the English birds are invariably started singly, whereas the Belgian birds are nursed home a greater part of the distance by many others; fourthly, any person in this country who can carry a gun considers it capital sport to shoot exhausted pigeons when nearing home, although per-

haps they are flying for large stakes—whereas in Belgium the poorest person will protect them."

And a writer in the Field maintained—

"The longer distances accomplished by the Belgian birds are partly owing to the manner in which they are trained. In Belgium all the pigeons are trained at the same time, and liberated together at the stations on the road, each successive station being farther than the preceding one from the home of the birds. In England, on the contrary, the practice is for each amateur to train his own pigeons; consequently, instead of returning in a flock, each flies singly, and is dependent on his own individual observation for direction, and the test is much more severe. Many pigeons, that will return home 100 miles in company, will be lost if they are flown that distance singly."

Mr. Kenrick, who has had the advantage of a lengthened residence in England and Belgium, replied to this statement, maintaining—

"That it is a well-known fact among Belgian amateurs that when their pigeons are all liberated together, they do not return home in a flock, but singly; and although two or three occasionally return together, this is an exception to the general rule. Many hundred results of matches, published weekly in L'Epervier, bear out this statement. I think if a flock were let loose together five or six miles from home, they all, or most of them, would return together. The longer distances accomplished by the Belgian birds cannot therefore, I think, be attributed to their being let off in a flock, as that would be more likely to embarrass them than otherwise. The English plan, starting the

birds singly at intervals, I should consider hardly a fair trial, as they might encounter different weather and different circumstances of various kinds. Perhaps the most satisfactory plan would be to fly the same birds over the same course twice, at a week's interval, once in the Belgian and once in the English mode. The result would go far to settle the question."

Between these two opinions the balance was very fairly held by another correspondent, who writes:—

"I have noticed the complaints that pigeons in this country cannot fly the long distances annually performed by the same breed of birds in Belgium; perhaps the following may in some measure account for the supposed difficulty of training in this country. First and foremost, pigeon-flying here is not popular, and is practised but on a limited scale, and that only in some districts of England; whereas almost every village in Belgium boasts a society, which is well supported by surrounding amateurs, who in return have their pigeons trained for, comparatively speaking, a small sum-so much a head for every bird sent-with the assurance that they can depend upon having their birds well taken care of. Compare this with our system: here, every one has to train his own birds. and to trust in a great measure to strangers to despatch them (as for single individuals to send a man to accompany their specimens would, of course, be far too expensive). The pigeons are thus liable to be left for any length of time lying about uncared-for at some railway station, and eventually turned up during heavy rain, through which contretemps many a good bird has been lost, that would otherwise have returned. Again, the number of flying pigeons kept in this country are very few as compared with those in Belgium, which tends to blind amateurs here to the numbers which must annually be lost in the long concours from the south of France, when as many as 600 or 700 are frequently despatched at once, out of which a certain few are almost bound to reach home in good time under favourable circumstances. Of the arrival of these we all hear, but no mention is made of those which never return.

"Another important point which fanciers are apt to lose sight of, is training their birds too severely when young. A pigeon ought not to be sent over 200 miles until it is at least two years old, as before that time it has barely attained to its full development, either of muscle or intellect. Then, again, pigeons are often shot whilst returning, or, more generally, having failed to reach their homes, and being exhausted after a long fly, seek a night's rest on some housetop, and fall a prey to some rural pot-hunter; I think that if birds in this country received a good education, and had the same care and attention bestowed upon them, there would then be no difficulty in our flying pigeons over 300 miles with a degree of certainty, as I hold it to be quite an erroneous idea to suppose pigeons have more difficulty in finding their way home in England than in Belgium—a fact which I think was fully demonstrated by the flight from Liverpool to Ghent, in which twenty-two out of the thirty pigeons despatched reached home safely, eight even arriving the same dav."

My own opinion of the inferiority of the performances of birds in England, as compared with that of those in Belgium, is based upon my firm conviction that the Homing faculty depends solely upon observation and intelligence, as

opposed to instinct; or, in other words, that the birds fly by sight, a subject that will be fully discussed in a following chapter. Now, the air in France and Belgium is infinitely clearer than in our humid atmosphere, and much greater distances are able to be perceived. Again, an infinitely larger number of birds are put in training—perhaps the proportion of one hundred in Belgium to every one trained in England; and, lastly, the birds are protected in their flights by the strong arm of the law on the Continent; whilst in this country any hedge-popper thinks he has done something to boast of if he has succeeded in killing a neighbour's pigeon.

The opinion of Dr. Chapuis, previously quoted, as to the impolicy, not to say cruelty, of flying hens during the breeding season is amply borne out by the experience of English amateurs.

My friend "Carrier," whose practical know-

My friend "Carrier," whose practical knowledge of the subject renders his opinion most valuable, writes:—

"Men who understand flying pigeons do not fly hens in breeding time, because from the moment the second egg is laid, until the young birds are sufficiently fledged to be left in the day, the hen does very nearly three-fourths of the sitting; and when she does leave the young, and flies out with the cock, he immediately drives her to nest. She often lays another pair of eggs in the same nest with the young ones, and many days before they can feed themselves

and dispense with her care. But if the hen, three days after she has left the young ones, be sent to do whatever journey she has at any period of her life done before, you may (bar accident from hawk and shot) rely absolutely upon her doing it. After the sixth day, however, the cock gets more assiduous. drives her harder day by day, fatiguing and weakening her very much, until she lays again. Often a cock is so jealous at this time, and drives the hen so much, that he will not let her eat near the other birds, and pursues her to such an extent, that the poor thing is so reduced in strength for want of food as to be incapable of laying the eggs she is bearing. and sometimes dies. On this account it is a good plan with birds one sets any store by, to put both food and water, during the time the cock is driving the hen to nest, close alongside the breeding-place, for then he will always let her feed, because his object (that of driving her to the nest to lay) is attained. It is plain, therefore, why 'flying' men don't work hens during the breeding season. But, on the other hand, it is thoroughly well known that a cock always works better in the breeding season than at other times, because his anxiety to get home to his hen, eggs, or young is great. As to a cock which possesses these stopping, and being caught when on a journey, from rankness alone, such a thing was never done by any moderate bird of the 'homing' breeds, or their inter-crosses. Whereas with a young cock, which has not been regularly matched, and in his first rankness, it is a well-known fact that no matter how good his breed or he may be, he is more easily caught at this time than at any other of his life; he will often slap off the house with a crop full of food, rake about, join another flight, pitch with them, play up to some hen, and if he should happen to spot an unmatched one who will show to him, he

will follow her into the trap or even the house, like a stupid young fool; but he does not mean staying for good, not he! and mightily astonished is he when he finds he is trapped. I have caught many a one like this, keeping out of his sight until he has been fairly in the trap, and have highly enjoyed his start of surprise at seeing me, and at the way he has tried again to be off home. 'Too late, my boy,' I have laughingly said, as I have caught him, to undergo that head-and-eye quizzing, wing-opening, shouldertrying, smoothing, coaxing examination that your pigeon lover always gives to a nice-looking bird, when he takes it in hand for the first time, and mentally 'reckons it up.' But don't calculate on matching and stopping him because you have caught him thus at this the most trying time of his life. If he is 'soft,' he may stay; if of the right metal, he will leave you, like a gallant bird should, the instant you give him a chance. No good hen, at this age, was ever thus caught; and on this account young hens are more reliable than young cocks in training."

The fact that it is only the old and seasoned birds that are flown in the long-distance concours is one which cannot be too strongly impressed upon the English amateur. As an example of the great amount of good work which can be got out of a single pigeon, I will transcribe the following account of the several concours engaged in by one bird formerly belonging to Monsieur C. Caesteker, the President of the Hope Society at Bruges:—

In 1859, this bird flew from Paris, Clermont and Ferrand; in 1860, from Paris, Nevers and

Toulon; in 1861, from Paris, Orleans and Châteauroux; in 1863, from Amiens, Paris, Kerron and Périgeaux; in 1864, from Paris, Kerron and Bayonne; and in 1868, was lost at Rome.

The "panniers," or baskets, in which the pigeons are sent to be trained are worthy of notice, being far superior to those generally used in this country. A small one, to hold six birds, is represented in the woodcut. Its

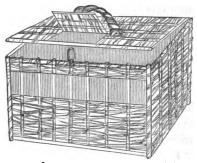


FIG. 9.—BELGIAN PANNIER FOR IGEONS.

size is sixteen inches long, by ten inches broad, and eight inches high; the front only is open, to give the birds food and water, which should be supplied in vessels placed outside. So desirous are the Belgian amateurs to accustom their birds to feed through the bars, that they place in their own lofts the food and water

behind perpendicular rods or wires placed at similar distances apart. In the lid is a smaller lid; this serves to place the birds in the pannier, after having been stamped, and the entire cover lifts up to allow the birds to escape simultaneously when flown. In the large concours, where several hundred birds compete together, they are sent in larger panniers of the same construction, each one calculated to hold about thirty birds.

In order to prevent the fraudulent abstraction of the birds, each pannier is secured with *plombs* de sureté; these are small perforated disks of lead, through which the strings that secure the

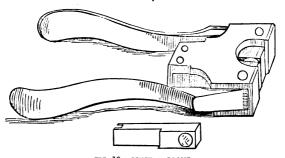


FIG. 10.—PINCE A PLOMB.

panniers are passed; they are then knotted, and the *plomb* brought over the knot; the *pince a plomb*, an instrument of most extraordinary power, is then brought into use, and the *plomb* is pressed into a leaden seal engraved on both sides, which cannot possibly be opened without detection.

The engravings show the pince, with one engraved die removed, and also a plomb or lead of full size before use and after, having been affixed to the cords securing the lid of the pannier.





FIG. 11.—PLOMB BEFORE USE. FIG. 12.—PLOMB AFTER FIXING ON STRING.

CHAPTER V.

THE HOMING FACULTY—INSTINCT OR INTEL-LIGENCE?

No circumstance connected with Homing pigeons has been more warmly debated than the nature of the faculty by means of which these birds are enabled to direct their flight to their far distant homes. Those persons who have no practical knowledge of the management and training of these birds invariably regard this faculty as a "wonderful instinct;" on the other hand, those most acquainted practically with the subject, usually regard it as a mere exercise of the perceptive faculties of the birds. having no relation whatever to the unreasoning instinct which directs, or is said to direct, the actions of so many animals. years since I published the following notes on the subject in the Field newspaper, and I have since seen no reason to modify the conclusions at which I had then arrived; on the contrary, many circumstances have come to my knowledge which tends to strengthen them. I formerly stated:—

"With regard to the faculty that these birds possess of returning home from long distances, I believe more erroneous statements have been written respecting it than on any other subject connected with pigeons. It is usually attributed to some mysterious power or instinct that these birds possess, and that is not possessed by Turbits, Fantails, Jacobins, or other varieties. I believe that instinct has nothing whatever to do with the homing power, but that the birds find their way solely by observation; and I ground my belief on the following facts:—

"Any peculiar instinct—such as that of nest-building, power of migration, &c.—bestowed on any species, is equally bestowed on all the individuals of that species, and not on a few only; thus, all swallows migrate, but all pigeons do not return home from a hundred miles' distance.

"Instinct is the same in all cases. All swallows fly south in autumn; but the Homing pigeon can return home north, south, east, or west—a variation in action that is incompatible with the notion of an unreasoning instinct.

"Pigeons must be regularly trained by stages, or they will be inevitably lost if flown one hundred or two hundred miles from home.

"The best birds will refuse to fly in a fog;

nor will I ever believe, except from personal experience, that a bird will fly home in the dark. I have tried many experiments, and lost many of my best birds in so doing. On one occasion I took a bird, that had often flown fifty miles, to a distance of five miles, and threw him on a foggy day; he at once settled at the top of a house, and remained there until the fog cleared off. On another occasion I let two of my very best birds loose in London at four o'clock P.M., early in January. One perched over a door, and when driven up, flew on to the opposite house. Of the two, only one returned home, on the following morning; the other probably falling a prey to the cats.

"To any one who has ever been in the habit of flying these birds, the idea of instinct is absurd. A bird thrown in a new locality flies round and round in gradually-increasing circles, until at length it descries some familiar object, and then, and then only, darts off on its homeward flight. Throw the same bird again, in the same locality, and if a good intelligent bird there is no wheeling round, but, the road being known, he is off instantly.

"I know I shall be met by the fact that no bird can see two hundred miles, to say nothing of five hundred. In that I perfectly agree; but no bird will return home two hundred miles

without he has been trained by stages on the road. Few persons have any idea of the extent of vision from an elevated point of view. Mr. Glaisher stated, some time since, that at half a mile elevation in his balloon he saw the whole course of the Thames, from the Nore to Richmond, in one view. And I may remark that as the earth's surface on a dead level curves eight inches in a mile, and as the curve increases as the square of the distance, it is very easy to calculate the range of vision from any altitude. Thus, at a height of a little above four hundred feet, the extent of vision, even if the surface were a perfect level, as that of the sea, would be twenty-five miles on every side. But in every land view there are prominent objects that can be seen at much greater distances; and no one who has ever flown his pigeons but must have observed them looking on all sides, turning the head as they wheel round and round, until they discern some familiar object. questions that do not offer a ready solution, there is a disposition to refer the effect to some mysterious agency beyond human ken. It is much easier to cut short the question of the homing faculty of pigeons, and call it instinct, than to investigate the facts of the phenomena."

I may adduce a few additional facts, bearing on this disputed question. In spite of all the

nonsense that has been written on the subject by those not practically acquainted with the management of Homing birds, there is no doubt that regular training is an indispensable condition to success in the great Belgian races. My friend Mr. C. H. Mills, of the Société d'Abéona of Brussels, writes:—

"Training forms a most important element in the success we obtain in flying our birds; we have, most of us here, pigeons equal to the task of doing their 500 miles and upwards, but we never at the commencement of the season send them at any considerable distance right off. Our training for old birds begins in May, when they are despatched at a distance averaging ten miles for their first journey, twenty miles off for their second stage, and so on, although some of the birds have been over the ground ten or fifteen times; in this way I have myself trained old birds as far as Paris (190 miles), and then sent them right off to the great annual match from the south of France (500 miles). The usual practice, however, consists in sending them, after their return from Paris, to an intermediate station, say at the distance of Bourges (150 beyond Paris). The experiment has been tried of sending old birds right off to Paris, but with very indifferent success; many were lost, and the remainder came back very slowly. Regular and serious training annually is absolutely necessary to ensure a successful and swift return of our interesting little travellers."

Some experimental flights, recently made by Mr. C. L. Sutherland, throw much light on this question. This gentleman writes as follows:—

"Having occasion to go into Northamptonshire at the beginning of March, I thought it would be a good opportunity to make an experiment with some Antwerps I bred last season from birds picked out at I should premise by saying that the Barber's. parent birds were not stamped on the wings when I picked them out, but that they were very good-looking as homing birds. I accordingly selected four experimental mealies of my own, and Mr. Alfred Lubbock, of High Elms, near Orpington, Kent, sent me a long-faced red chequer hen, as well as a blue chequer hen, and Mr. Fisher, of Redhill, contributed three cocks—a blue, a blue chequer, and a mealy. With this lot of nine Antwerps I accordingly arrived at Pitsford Hall (four miles north of Northampton). the residence of Mr. J. N. Beasley. The pigeons had undergone no previous training, comparatively speaking, not one of them having been tossed farther north than London.

"On the morning of Saturday, March 4, at 11 o'clock precisely, as previously arranged, we tossed the nine birds about five minutes apart. The day was very unfavourable for pigeon-flying, the atmosphere being very hazy, and a strong south wind blowing. Indeed, so bad was the day, that I should not have tossed the pigeons at all had I considered them very valuable; but as they were only drafts from our respective lofts, it did not much matter whether they returned home or not. To speak first of my own four experimental mealies. They have simply never since been heard of (with the exception of one, which took advantage of the wind to go to Market Harborough, fifteen miles north), which, to my mind, proves the utter folly of breeding from stock one knows nothing about. Of Mr. Fisher's three birds, the blue was back at Redhill, a distance of eighty-three miles from Pitsford, measured in a

straight line, at 7 A.M. on the following morning (Sunday), and the blue chequer at 8.45 A.M. The mealy has not appeared since. Mr. Lubbock considered the return of his birds in anything like decent time so extremely problematical, that he omitted to see whether they had returned on the Saturday, but on going into his pigeon-house on Sunday morning at 10 o'clock, the first bird that caught his eye was the long-faced red chequer hen. The blue chequer has not returned.

"And now to speak of what little training these birds had received. Mr. Fisher's blue had never been tossed but once before, and then from Hassock's Gate, due south. The blue chequer has been tossed but a very few times, and never north of London. He had, however, previously stamped himself as a good voyageur, having flown—last summer, I think—from Canterbury to Redhill, about fifty miles, without any intermediate training, in something like four or five hours. Mr. Lubbock's red chequer hen has been flown this year some fifteen miles all round, but never farther north than London. The distance from Pitsford to Orpington, measured in a straight line, is seventy-eight miles.

"I think most flying men will agree with me in considering the performance of the three birds which returned as extraordinarily good in the absence of systematic training. The distance, to be sure, is trifling, supposing the birds to have been previously trained on the road; but for these pigeons to return home eighty miles on a foggy, windy day, proves to my mind that there must be something more than sight at work as an agent in the matter. At all events, it is a feat in pigeon-flying which I am sure most amateurs will agree with me in considering as well worthy of being placed on record; and, as I said before, I can bring forward most incontestable evidence, if

necessary, to prove every word I have written on the subject.

"I should add that I persuaded Mr. Fisher to send me down again to Pitsford the two birds which returned to Redhill; that I again tossed them from Pitsford on Wednesday, the 15th of March, at 11.10. A.M., and that Mr. Fisher writes me word that they were back at Redhill sometime between 1.5 and 1.22 P.M. of the same day—say it was 1.15. This is very good—eighty-three miles in two hours and five minutes. It only shows what training will do for birds. There were about two inches of snow on the ground on the 15th, which, if sight has much to do with it, must have made it very puzzling for the voyageurs. Sight no doubt has a great deal to do with pigeons returning home; but I think that intelligence has more. Get hold of the right breed to start with, and educate the birds carefully, and there is no distance in reason they will not do.

"I may state that Mr. Fisher's birds are all of Mr. Kenrick's breed, and Mr. Lubbock's red chequer hen is one of his own breeding, from a hen of Mr. Christy's strain."

These two experimental flights are of much interest; they prove, as far as so few cases can be said to prove, several points. Firstly, that little or no reliance can be placed on the progeny of good-looking but untrained birds, such as the unstamped Belgian pigeons that may be bought at the London dealers. Secondly, they show that the best birds, if untrained, require a long time to discover their route when flying over strange ground. Mr. Fisher's birds, that occu-

pied twenty hours in flying eighty-three miles on the first occasion, performed the same distance on the second journey in two hours. I confess I can see but one explanation of this difference—that in the first instance they were circling round to discover some landmarks to direct their flight, whereas, in the second journey, they were familiar with the road and flew direct.

But, probably, I shall be met with the statement that no pigeon can see eighty miles, much less two hundred or three hundred. Let me quote a few examples from perfectly disinterested witnesses to prove the contrary. Every resident in Bengal will tell you that the Himalaya mountains can be seen, with the naked eye, two hundred miles distant, from the plains; appearing, from being capped with everlasting snow, like white clouds on the distant horizon.

Mr. C. Darwin, in his history of a "Naturalist's Voyage Round the World," in H.M.S. Beagle, Chapter XIV., writing of a volcano in the Cordilleras, states that—

"When the Corcovado is in eruption, great massesare projected upwards, and seen to burst in the air; their size must be immense, for they can be distinguished from the high land behind S. Carlos, which is no less than ninety-three miles from the Corcovado." Mr. Glaisher, in his recent volume, describing his travels through the air, says:—

"At the height of three or four miles the view was indeed wonderful; the plan-like appearance of London and its suburbs; the map-like appearance of the country generally; and the winding Thames, leading the eye to the white cliffs of Margate, and on to Dover, were sharply defined. Brighton was seen, and the sea beyond, and all the coast-line up to Yarmouth."

And on another occasion, when 7,000 feet, or a mile and a third over London, he states:—

"Looking down, there was the Thames throughout its whole length, without the slightest mist, dotted over in its winding course with innumerable ships and steamboats, like moving toys. Gravesend was visible, also the mouth of the Thames, and the coast around as far as Norfolk."

Surely, after these statements, we need not doubt the possibility of a pigeon seeing as much of the country as is requisite to direct it in its homeward course.

The details of the celebrated concours from Rome (page 25) are quite opposed to the Homing-by-instinct theory; for if, out of 1,500 pigeons liberated at Agen, 500 miles from Belgium, upwards of 200 find their way back by instinct in two days, 150 coming back in less than forty hours, it ought not to have taken equally good birds more than three days to have

returned from Rome; but, on the contrary, it took the most rapid more than eleven days, and in a fortnight only four had returned out of the 200 despatched. But the birds flown from Agen had been trained repeatedly, and knew the stages of the journey. Those from Rome had to fly over 500 miles of ground perfectly unknown to them. These facts do not appear at all compatible with the idea of a blind instinct, but are readily to be understood, if we remember that these birds possess the power of flying 500 miles a day, and that of the 200 turned out at Rome, those few that eventually returned home continued their rapid flight from day to day until they eventually descried some known object which guided them in their course.

In these views regarding the Homing faculty, I am supported by the most experienced and intelligent amateurs. Mr. Galloway, who was well acquainted with the subject, made the following sensible remarks on the question:—

"Instinct being a primary condition, an unalterable law, uncertainty, hesitation, or mistakes can form no part of a perfect and unimprovable endowment. Instinct is intended as a ready substitute for reason, practice, or experience. The building of a bird's nest is an instinctive operation; the first built is no less perfect than the last. The young of the Carnivora are directed by instinct at once to their natural food;

and had they to wait the slow teaching of experience, they must inevitably perish. These are the natural operations of instinct, and are, consequently, independent of all teaching, training, or instruction.

"How, then, can it be supposed that pigeons will fly hundreds of miles and return home solely under the guidance of instinct? How can fogs, snow, or mountains affect an unerring faculty? and unless it be unerring it is not instinct.

"It is by no means necessary that pigeons flying by sight should form 'private charts' of a country to find their way home; it is evident they must require points of observation, or why train them by degrees? Did they possess either 'a natural affinity, or attraction,' why should not the whole number flown be operated on in a similar manner? So this process of affinity or attraction will not work, or all should arrive at the same destination. Those persons having most practical experience are tolerably well in agreement on the subject, and the visions of theorists will not alter their practice; knowing they can depend on nothing but sight and a good breed of birds with strong home attachment, they steadily pursue the plan pointed out by Belgian amateurs, and never expect success without offering their birds frequent views of the country, with the necessary accompaniment, a clear atmosphere. By pursuing this method, they do not expect them either to feel their way or to be drawn by attraction, but simply hope they may be enabled to see it.

"Is there one advocate of the theory of flight by instinct who will venture to send his birds eighty miles from home without previous training? This would test his theory, though those who believe solely in sight know well beforehand the certain result of the proposed experiment."

The disputed question as to pigeons homing by night is often adduced as bearing on this subject. There is no doubt that, in certain districts in the neighbourhood of large and well-lighted towns, pigeons have been trained to fly home four or five miles at night. In these cases, I believe they are directed by the lines of gaslights, and that they fly by sight in the same manner as they do by day.

In consequence of some correspondence having taken place on this subject, I publicly offered £10 for a pair of birds that could fly twenty-five miles on a dark night, but could get no one to accept my offer. As there are thousands of pigeons that can home 250 miles in the daylight, surely, if they are directed by instinct, they should be able to fly one-tenth of the distance in the dark. I have been making some experiments on night-flying with some of the best birds ever flown, and found that in districts where there are no lights to direct the flight of the birds, and on nights when there is not a bright moon, there is no possibility of making the birds fly home.

These various facts appear to me decisive of the question. I have paid much attention to the subject, and have endeavoured to investigate all the cases of so-called instinctive flying that have come under my notice. I have always found

them to be based on mere hearsay evidence, totally destitute of proof, and of impossible repetition—no more worthy of credence than the tricks of a contemptible conjuror, half-rogue, half-charlatan, who tells us that he subverts the laws that govern the universe, and floats in the air at will, or causes tables at command to walk up a wall.

APPENDIX I.

THE GREAT ANGLO-BELGIAN CONCOURS, CRYSTAL PALACE TO BELGIUM.

This small work on the Homing Pigeon could hardly be regarded as complete without giving the conditions of the first great Anglo-Belgian Concours from the Crystal Palace.

The history of this race is soon told. Being interested in the due appreciation of the Pigeon Voyageur, I arranged for the exhibition of a number of these birds at the Poultry and Pigeon Show held at the Crystal Palace in January last.

The class attracted so much attention, that I proposed to the Directors of the Crystal Palace to arrange that one of the National Belgian Concours should take place from their grounds. My proposal was most cordially received, and the sum of 1,000 francs as prix d'honneur was offered by the Directors. With my friends Messrs. C. L. Sutherland and A. Lubbock, I proceeded to Brussels to make the necessary arrangements for the Concours. Every assistance was at once

offered by M. Brunin of L'Epervier and the Brussels colombophiles, more especially those belonging to the Société d'Abéona.

The organization of the Concours was entrusted to this Society, and the regulations, of which the following is an abstract, were issued:—

"The concours is open to all the amateurs of the kingdom of Belgium. The pigeons are to compete in pairs or 'series of two,' the entry fee for each couple of pigeons being eight francs. The number of prizes will be in the proportion of one for every six couple of pigeons entered. The birds will be entered on or before the 16th of June, after which date each entry will be subject to a fine of two francs, which will serve to form extra prix d'honneur. must be the property of the person entering them: any fraud in their description will exclude the offender from all share in the prizes, and from all future concours arranged by the society. The birds will be received in Brussels on June 22, where they will be stamped, registered, and placed in panniers secured by 'plombs de sureté,' and conveyed to the Palace in charge of two gentlemen named by the society. On Saturday, the 24th of June, the pigeons will be again contremarqué with a private stamp provided by the Palace. The liberation will be precisely at mid-day on Monday, June 26, except the weather prove very unfavourable, in which case it will be deferred until the following day.

"The pigeons of amateurs living in or near Brussels will have to be produced at the bureau of the society on their return. The return of those in other parts of the kingdom will have to be telegraphed to Brussels, the telegram giving the private number

marked on each pigeon by the society, and the description of the bird. Time allowances at the rate of one minute for each kilomètre (five-eighths of a mile) will be made in the case of those pigeons that have to fly a greater or less distance than Brussels. These distances will be measured as the crow flies.

"A balance-sheet of the receipts and expenses will be published. The society reserves the right of refusing the entry of any person. Any case arising not met by the foregoing regulations will be adjudicated upon by the committee of the society and three disinterested amateurs."

I have given the details of the regulations, inasmuch as this is the first really important Belgian concours that has taken place in England; and, being in so public a locality as the Crystal Palace, it is desirable to make the regulations thoroughly known to the visitors. have already stated that the prizes will be, not for single birds, but for two birds entered together, both of which must be produced to win a prize. Thus, if an amateur enters a dozen birds, he cannot win with any two that may return first; they must be coupled when entered thus (A and B), (C and D), (E and F), and so on; and no prize would be awarded on the production of A and F, or D and E, but A and B, or E and F, &c., must be presented together. This arrangement prevents the owner who enters twenty or thirty couple from having an undue advantage over the owner of a smaller number.

In addition to the large sum resulting from the division of the entry fees, which will constitute the bulk of the prizes, the 1,000 francs offered as prix d'honneur by the Directors of the Crystal Palace, will be divided into twenty prizes, the first, second, third, and fourth being of one hundred, seventy-five, sixty-five, and sixty francs respectively, the fifth to the eighth of fifty francs, sixth to twelfth of forty-five francs, and thirteenth to twentieth of forty francs each. In addition, three medals are offered—one for the first pigeon that returns home, whose arrival will be immediately telegraphed to the Crystal Palace; a second to the amateur who wins the first prize of the series; and the third to the winner of the greatest number of prizes. Pools or sweepstakes will also be arranged, with prizes of twenty and fifty francs each.

APPENDIX II.

PIGEON-FLYING FROM BALLOONS.

Some experiments on the flight of pigeons in the higher regions of the atmosphere were made by Messrs. Coxwell and Glaisher in their highest ascents.

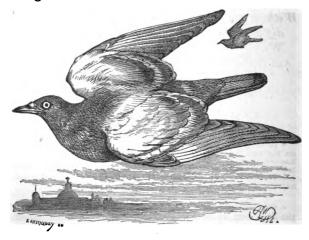
These possess a considerable amount of interest to the owners of Homing birds, and therefore I reproduce the account from Mr. Glaisher's "Travels through the Air."

In their highest experimental ascent from Wolverhampton, on Sept. 5, 1862, when the balloon reached the height of seven miles, and Mr. Glaisher became insensible, six birds were taken up, and Mr. Glaisher informs us that—

"One was thrown out at the height of three miles, when it extended its wings and dropped like a piece of paper; the second, at four miles, flew vigorously round and round, apparently taking a dip each time; a third was thrown out between four and five miles, and it fell downwards as a stone; a fourth was thrown out at four miles, on descending; it flew in a circle, and shortly alighted on the top of the balloon.

"The two remaining pigeons were brought down to the ground. One was found to be dead; and the other, a carrier, was still living, but would not leave the hand when I attempted to throw it off, till, after a quarter of an hour, it began to peck at a piece of ribbon with which its neck was encircled; it was then jerked off the finger, and shortly afterwards flew with some vigour towards Wolverhampton. One of the pigeons returned to Wolverhampton on Sunday the 7th, and it was the only one I ever heard of."

It is most probable that these pigeons were of the ordinary kind, as it is evident that they could not have been supplied to the æronauts by any one acquainted with pigeon-flying, as the ribbon round the neck abundantly testified; therefore little importance must be attached to the fact that they did not return home after being liberated.



Woodfall and Kinder, Printers, Milford Lane, Strand, London, W.C.

Mr. Tegetmeier's Work on Pigeons.

Imperial 8vo, handsomely bound in cloth, gilt edges, price 10s.

PIGEONS.

By W. B. TEGETMEIER, F.Z.S.,

ASSISTED BY THE FOLLOWING AUTHORITIES :-

The MEMBERS of the NA-TIONAL COLUMBARIAN SO-CIETY, on the Carriers.

Mr. F. ESQUILANT, on Almonds and Jacobines.

Mr. HARRISON WEIR, on Fantails.

Mr. JONES PERCIVAL, on Dragons.

Mr. P. H. JONES, on Barbs and Trumpeters.

Rev. A. G. BROOK, on Nuns.

Mr. BETTY, on Archangels.

The late Mr. BRENT, on German Toys.

AND MANY OTHER EMINENT FANCIERS.

With Twenty-seven Coloured Representations of the different Varieties, Drawn from Life by HARRISON WEIR,

And Printed in Colours by LEIGHTON BROTHERS; and numerous Woodcuts.

OPINIONS OF THE PRESS.

The Times.

"There can be few more attractive books than Mr. Tegetmeier's work on the structure, varieties, habits, and management of the bird which has been made the subject of so much care and study. The fine plates have been prepared under the direction of Mr. Harrison Weir, and are coloured from life. It is not easy to fancy that there can be anything to say about pigeons which is not included in this volume."

Morning Post.

"We can confidently speak of his scientific merits as a naturalist in the interesting general chapters of the book."

Morning Star.

"An enthusiastic naturalist is always a welcome visitor, coming to us full of information on subjects that interest every one. Mr. Tegetmeier is one of these pleasant acquaintances. Just now pigeons are his theme."

Morning Advertiser.

"The most complete, the handsomest, and the most accurate of pigeon books."

Daily Telegraph.

"To the amateur of pigeons the work will be invaluable. Moreover, the book is a beautiful one, with all its gorgeous varieties of columbine birds"

Athenæum.

"Another volume of valuable information and beautiful illustrations, worthy of a place on the shelves of every country gentleman."

Illustrated Times.

"The names of all the individuals concerned in getting up this book are quarantees of its excellence. The author is Mr. W. B. Tegetmeier, the illustrator is Mr. Harrison Weir, and the printers are Leighton Brothers. Mr. Tegetmeier has long been known as a diligent student of the natural history of the feathered tribes, and has already given to the world several works on his favorite theme."

Saturday Review.

"The skill shown by Mr. Tegetmeier in so marshalling the facts and materials of his 'Poultry Book,' so as to combine amusement and light reading with philosophical inquiry, is a sufficient guarantee that he will be neither uninteresting nor unfruitful on the subject of pigeons.

The same masterly judicial handling with which in the one, after quoting the opinions and experiences of past and present authorities, he sifted and summed them up, makes itself more distinctly felt when applied to the other.

We commend our readers to Mr. Tegetmeier's exhaustive pages.

Our author has accomplished the task he undertook, and produced a book upon pigeons in every way entitled to a place alongside of his admirable and universally accepted work on poultry."

The Standard.

"A very ornamental, as well as a very useful, book."

Mark Lane Express.

"Never, perhaps, was a subject more efficiently treated. It is a credit alike to editor, artist, printer, and publisher."

Land and Water.

"It supplies valuable information, principally gained by personal experience of the habits, structure, breeding, rearing, and management, and will prove a welcome acquisition, not only to the amateur and fancier, but also to the prize-taker who breeds for the honour of the awards."

London Review.

"The author has treated his subject in a more scientific manner than has been hitherto attempted; and his book contains much more original matter than any of the more modern works on the same subject. Mr. Tegetmeier has consulted with scrupulous attention the best authorities; and, though he informs us in his preface that whatever information he has taken from other writers has been in all cases acknowledged, yet we are pleased to see that there is not an undue predominance of inverted commas in his work."

London: GEORGE ROUTLEDGE & SONS, The Broadway, Ludgate. New York: 416, Broome Street.

Mr. Tegetmeier's Work on Poultry.

Imperial 8vo, handsomely bound in cloth, bevelled boards, gilt edges, price 18s.

THE

POULTRY BOOK.

By W. B. TEGETMEIER, F.Z.S.,

ASSISTED BY THE FOLLOWING GENTLEMEN :-

Mr. E. HEWITT, on Dorkings, Cochins, Sebright Bantams, Polish, &c.

Mr. R. TEEBAY, on Brahmas and Hamburghs.

Mr. F. ZURHORST, on White Cochins, Sultans, and the French Breeds. Mr. P. H. JONES, on Polish and Brahmas.

Mr. J. DOUGLAS, on Dorkings and Game.

The Rev. A. G. BROOK, on Malays.

The late Mr. B. P. BRENT, on Many-spurred Game.

AND MANY OTHER EMINENT AUTHORITIES.

With Thirty full-page Illustrations of the different Varieties, Drawn from Life by Harrison Weir,

And Printed in Colours by LEIGHTON BROTHERS; and numerous Woodcuts.

OPINIONS OF THE PRESS.

Saturday Review.

"For Mr. Tegetmeier's 'Poultry Book,' its comprehensiveness, research, philosophic treatment, and charms of anecdote and description, the fittest expression of praise we can find is, that it is a book no country gentleman's library ought to be without. A volume which is invaluable as a book of reference, and of multifarious research."

Athenæum.

"The 'Poultry Book' is edited by the Editor of 'The Standard of Excellence,' and supplied with information by breeders of renown, and by judges whose decrees are final in the prize shows. The best adapted for exhibitors."

Standard.

"A grand volume, profusely and admirably illustrated. So well is Mr. Tegetmeier known in connection with the subject of poultry, that any commendation of the text of works edited by him is needless."

Morning Post.

"The most complete work which has yet been published. It is impossible to give an adequate idea of the amount of information contained in this work. . . . Essentially practical and useful."

Sporting Gazette.

"Mr. Tegetmeier, himself an accomplished naturalist and acknowledged authority on the subject of poultry, has been aided by contributions from the most eminent breeders of the different varieties of profitable and ornamental poultry, so as to render this treatise, for fulness of detail and the practical character of the information imparted, more reliable and complete than any work on the subject previously published."

The Field.

"Mr. Tegetmeier has had recourse to the most eminent authorities on each particular breed."

Morning Star.

"We have all heard, and often, of the fame of Mr. Tegetmeier as a high authority in the breeding and management of poultry, but had not anticipated till now in how gorgoous a volume the result of his experience would be preserved to the world. Its greater value will consist in the mass of really practical information on poultry management."

Mark Lane Express.

"The work is one of the best and most elaborate on the subject of poultry-keeping that has ever been published, and leaves little or nothing for any future writer to add to it."

Scotsman.

"So superb a work as this on the subject of poultry is a sort of sign of the times. An admirable one of its class; as useful as it is most certainly ornamental."

Sportsman.

"A valuable acquisition, for not only are the more ornamental breeds described with accuracy, but great attention has been paid to the practical details of poultry-keeping.... The most approved modes of fattening, as followed in England, are given; and the methods adopted in France to produce the celebrated fat capons are described at length."

Land and Water.

"We cannot dismiss the book without saying that whilst it will be an attractive one on the drawing-room table, it is essential among the books of the farm, and to those who keep poultry either for home pleasure or for public exhibition."

Illustrated Times.

"The fruits of years of thought, experiment, and observation, are embodied in the work."

London: GEORGE ROUTLEDGE & SONS, The Broadway, Ludgate. New York: 416, Broome Street.

ROUTLEDGE'S USEFUL LIBRARY.

INCLUDING THE SHILLING LAW BOOKS. *

In fcap, 8vo, cloth limp or illustrated boards, is. each. (Postage 2d.)

LADIES' AND GENTLEMEN'S LETTER WRITER. With Applications for Situations, and a Copious Appendix of Forms of Addresses. &c.

HISTORY OF FRANCE, from the Earliest Period to the Peace of Paris, 1856. Amelia B. Edwards.

RUNDELL'S DOMESTIC COOKERY, Unabridged, with Illustrations.

NOTES ON HEALTH: How to Preserve and Regain it.

W. T. Coleman, M.D. COMMON OBJECTS OF THE MICROSCOPE, with 400 Coloured Illustrations, by Tuffen West. Rev. J. G. Wood.

ONE THOUSAND HINTS FOR THE TABLE, including Wines. THE LICENSED VICTUALLERS' HANDBOOK. W. A. Holdsworth. INFANT MANAGEMENT. Mrs. Pedlev.

PRACTICAL HOUSEKEEPING.

Mrs. Pedley.

A Manual of Weathercasts and Storm Prognostics. Steinmetz.

COMMERCIAL LETTER WRITER. HOME BOOK OF DOMESTIC ECONOMY.

P. L. Simmonds.

Anne Rowman. COMMON THINGS OF EVERY-DAY LIFE.

Anne Bowman.

A HANDBOOK OF ENGLISH PROSE AND DRAMATIC LITE-A HANDBOOK OF ENGLISH POETRY. RATURE.

THE BOOK OF READY-MADE SPEECHES.

INTEREST AND ANNUITIES.

VELOCIPEDES.

Price 1s. 6d. each.

LANDMARKS OF THE HISTORY OF ENGLAND. Rev. J. White. LANDMARKS OF THE HISTORY OF GREECE. With a Map. Rev. James White.

THE GAZETTEER OF GREAT BRITAIN AND IRELAND.

POPULAR LAW BOOKS. Price 1s. each. (Postage 2d.)

LANDLORD AND TENANT (The Law of), with an Appendix of Useful Forms, Glossary of Law Terms. W. A. Holdsworth.

WILLS, EXECUTORS, AND ADMINISTRATORS (The Law of), with Useful Forms. W. A. Holdsworth.

THE COUNTY COURT GUIDE, with Forms. W. A. Holdsworth. THE NEW BANKRUPTCY LAW, with the Rules and Orders. THE FAMILY LAWYER. (Price 25.) A. Fonblanque.

Published by George Routledge and Sons.

ROUTLEDGE'S

MINIATURE LIBRARY. SIXPENNY

Cloth, gilt edges. (Postage 1d.)

The Language of Flowers. Etiquette for Gentlemen. Etiquette for Ladies. Etiquette of Courtship and Ma- How to Dress Well. trimony.

The Ball-Room Manual Carving. Toasts and Sentiments.

ROUTLEDGE'S SHILLING SONG BOOKS.

EDITED AND COMPILED BY I. E. CARPENTER.

Fcap. 24mo, boards, with fancy covers. (Postage 2d.)

The Modern Song Book. The Popular Song Book. The New Universal Song Book, The Comic Song Book. The Humorous Song Book. The New British Song Book. The Entertainer's Song Book.

The New Standard Song Book. The Comic Vocalist. The New Scotch Song Book. The New Irish Song Book. The Moral Song Book. The Religious Song Book.

ROUTLEDGE'S SIXPENNY SONG BOOKS.

EDITED BY J. E. CARPENTER.

Each 144 pp. fcap. 24mo, fancy covers. (Postage 1d.)

The Fire-side Song Book. The Home Songster. The British Song Book. Songs for All Ages. The Select Songster. The Convivial Songster. Merry Songs for Merry Meetings. The Funny Man's Song Book. The Fashionable Song Book. The Drawing-Room Song Book. The Laughable Song Book. The Sensation Songster. Everybody's Song Book. The Social Song Book.

The Family Song Book. The Amusing Songster. The Social Songster. Songs for All Seasons. The Droll Ditty Song Book. The Whimsical Songster. The Highland Songster. The Blue-Bell Songster. The Shamrock Songster. The Mayourneen Songster. The Sacred Songster. The Devout Songster. Songs for the Righteous. Songs of Grace.

Songs, Rounds, and Quartets. Words and Music. By Rev. Guise Tucker, M.A., and C. H. Purday.

HEARTY STAVES OF HEART MUSIC. By Rev. J. E. Clarks 4d.

Published by George Routledge and Sons.

ROUTLEDGE'S CHEAP DICTIONARIES.

Edited by Dr. NUTTALL.

Well printed. Bound in cloth.

WALKER'S PRONOUNCING DICTIONARY, containing all the New Words. 13.

DIAMOND DICTIONARY, 640 pages, 25,000 Words, clear type. 11.

JOHNSON'S DICTIONARY, adapted to the Present State of Literature. 15.

JOHNSON'S DICTIONARY. 1s.

WEBSTER'S PRONOUNCING DICTIONARY: 2,000 New Words; Scripture Names. 15.

JOHNSON'S POCKET DICTIONARY, with Walker's Pronunciation. 32mo, 9d.

JOHNSON'S POCKET DICTIONARY. Royal 32mo, 6d.

NUTTALL'S, Dr., PRONOUNCING DICTIONARY OF THE ENGLISH LANGUAGE. Founded on Walker, Webster, Worcester, Craig, Ogilvie. Cloth, 800 pages, 3s. 6d.; Roxburghe binding, gilt tops, 5s.

CHEAP RECKONERS.

MASTERS' READY RECKONER. 12th Thousand. Edited by John Heaton. Comprises Tables of Interest, Commission, Wages, Per-centage and Profit, Time, Weights and Measures, Decimal Tables, Marketing Tables, Bill-Stamps, &c. 15. (Postage 2d.)

THE MINIATURE READY RECKONER. 6d.

THE TRADESMAN'S READY CALCULATOR OF MEASURE-MENT FOR MASONS, PLASTERERS, PAINTERS, &c. Shows the contents, in square yards, of any space measured in feet and inches. 6d.

ROUTLEDGE'S READY P.ECKONER. 360 pages. By John Heaton. 1s. 6d. (Postage 3d.)

"The most complete Reckoner ever published."

*** Sample Pages on application.

ROUTLEDGE'S PENNY TABLE BOOK.

64 pages of Useful Information.



Published by George Routledge and Sons.



BOOKS FOR THE COUNTRY.

With Numerous Illustrations. Price 1s. each. (Postage 2d.) AOUARIUM (Fresh and Salt Water). Rev. J. G. Wood, M.A. ANGLING, and Where to Go. BLAKEY. PIGEONS AND RABBITS. Illustrated by Harrison Weir. DELAMER. SHOOTING. Illustrated by Harrison Weir. BLAKEY. THE SHEEP. Illustrations by Harvey. W. C. L. MARTIN. THE PIG: How to Choose, Breed, Rear, Keep, &c. MARTIN and SIDNEY. FLAX AND HEMP: Their Culture and Manipulation. Plates. DELAMER, THE POULTRY YARD. Illustrated by Harrison Weir. E. WATTS. THE HORSE. Illustrated by Wells. CECIL and YOUATT. BEES: Their Habits, Management, and Treatment, &c. Rev. J. G. WOOD. CAGE AND SINGING BIRDS. H. G. ADAMS. SMALL FARMS, and How they Ought to be Managed. M. DOYLE. THE KITCHEN GARDEN. DELAMER. THE FLOWER GARDEN. DELAMER. THE FARMER'S MANUAL. M. DOYLE. FIELD AND GARDEN PLANTS. M. DOYLE. COMMON OBJECTS OF THE SEA-SHORE. Rev. J. G. WOOD, M.A. COMMON OBJECTS OF THE COUNTRY. Rev. J. G. WOOD, M.A. WOODLANDS, HEATHS, AND HEDGES. COLEMAN. BRITISH FERNS. Boards. Coloured Plates. THOMAS MOORE, F.L.S. FAVOURITE FLOWERS: How to Grow them. A. G. SUTTON. BRITISH BUTTERFLIES. With 200 Illustrations. COLEMAN. BIRDS' EGGS AND NESTS. 120 Illustrations. Rev. F. C. ATKINSON. LIFE OF A NAG HORSE. Fcap. 8vo. Boards. J. TAYLOR. FOOD, FEEDING, AND MANURE. SIBSON. CRAB, SHRIMP, AND LOBSTER LORE. W. B. LORD, R.A. COMMON BRITISH MOTHS. Rev. J. G. WOOD. Price 1s. 6d. each. (Postage 2d.)

CATTLE: Their Various Breeds, Management, and Diseases. Also the Dairy, and Cattle Plague. Revised by W. and H. Raynbird. W. C. L. MARTIN.

THE RAT. With Anecdotes. UNCLE JAMES.

DOGS: Their Management in Health and Disease. With Illustrations. EDWARD MAYHEW, M.R.C. V.S.

SCIENTIFIC FARMING MADE EASY. Fcap, 8vo. T. C. FLETCHER. GEOLOGICAL GOSSIP. Professor ANSTED. SIBSON'S AGRICULTURAL CHEMISTRY.

Price 2s. in boards.

WILD FLOWERS: Where to Find and How to Know them. Illustrated. SPENCER THOMSON. SIBSON'S EVERY-DAY CHEMISTRY.

GEORGE ROUTLEDGE & SONS, THE BROADWAY, LUDGATE.