

HOMING PIGEONS.

HE homing pigeon of England and America is the voyageur of France and Belgium, the brieftauben of Germany, and the carrier of the misinformed. But, whatever the name, the application has reference to the love of home and the impulse and ability to return to it. This love and impulse is not peculiar to the pigeon, nor is it possessed by all members of its family, but the pigeon alone of the birds of the air has submitted to the control of man and is to be trusted with its liberty, and in it alone have these qualities been fostered and developed.

That these qualities have always existed in certain varieties is beyond question, since it is upon record that man has recognized their value and subjected them to his use almost from the beginning, in making the pigeon his message-bearer in connection with some of the most important events the world has ever

The use of these traversers of space as couriers to beleaguered Paris in the Franco-German war was a case of history repeating itself, but coming within our own day it is to us a fact, not story, and has the force of an experience. The relief these couriers brought to the enforced silence and seclusion of the siege cannot be overestimated, but it stands for less in the world's great account than the revelation there was of the opportunities the use of the bird afforded, and which the powers of the continent were not slow to recognize, as evidenced in the immediate addition of pigeons to the military equipment.

When the siege began, there seemed to be no chance to receive a word from beyond the walls while the investment lasted, and hope of it was abandoned. But to get word to the anxious world outside seemed possible, and a balloon service was ventured upon. The anxiety as to the fate of the first aëronaut and his precious cargo led to the suggestion that ered with wax, then bound to a feather of the pigeons might be sent along to bring word of tail. They were next photographed, to reduce

the result to the waiting city. This was acted upon, and when birds carried away in the second balloon sent out at eleven o'clock in the morning returned at five in the afternoon, announcing the safe descent and the forwarding of the letters and dispatches, the way was at once opened to a broader use. The birds of the third balloon were sent to the authorities at Tours, the seat of the Government, with instructions to use them as official messengers. Each flight of the birds was made with increased efficiency, and within a month of their first employment the service of "its courier pigeons" was thrown open to the public by the administration of telegraphs and posts. The extent of the service rendered may be conceived when it is known that one hundred and fifty thousand official dispatches and over a million private messages were carried over the heads of the besieging Germans into Paris. It was as Pliny said of the siege of Modena, "Of what use were all the efforts of the enemy when Brutus had his couriers in the air."

Of the sixty-four balloons sent out, two were lost, five were captured by the Prussians, and one was carried by a storm into Norway. All others descended upon friendly territory. Three hundred and sixty-three birds in all were taken from Paris, but, although the birds seventy-three times escaped the hawks and guns of the Germans and returned with messages, the work was done by fifty-seven, as several made the journey more than once. One bird known as the "Angel of the Siege" made the journey six times. One pigeon caught was sent by the Prince Frederick Charles to his mother, as a prisoner of war. After four years of confinement in the royal lofts, the little French bird took advantage of an opportunity to escape and returned to its old home.

The messages were at first written upon one side of the paper. This was folded and cov-

sent by the several birds. The next change was first to set the matter in type, and to photograph upon both sides of the paper. Later, when the Government was removed to Bordeaux, a thin film of collodion was taken as the surface, and though only one side was used, a single film contained twenty-five messages, and a bird could carry a dozen films. With the photographed messages a new method of transmission was adopted; they were inserted in a section of a quill, which was bound to the tail-feathers by passing a silken cord through holes pierced in the ends

by a red-hot steel point.

The military lofts of Germany are the most complete in every particular ever known. No expense is spared in their maintenance, in the selection of stock, and in experiment and contrivance to render the service of greatest value in time of need. The plant consists of flights at each military center, and the training is in using the birds for every conceivable emergency. The Government further essays to engage outside coöperation by the encouragement of pigeon-flying as a national sport. The method of sending the message said to be best approved by Herr Lenzen, the director, is to place it, reduced by microphotography, in the quill of a loose tail-feather of the color of the bird that is to carry it. This, fastened among the tail-feathers, is practically invisible to the unassisted or inexperienced eye. The pigeon-lofts of France are rapidly approaching German proportions, and expedient follows experiment in forestalling situations which might arise for the actual use of the birds. One curious experiment to insure communication between two invested cities or fortresses is worthy of the age. Young birds are taken from the nursery to the loft of one station and detained until they know the place as home. They are then removed to another to remain until they also feel familiar with it. They are finally taught to look to the one for food and to the other for water, thus causing them to journey from one to the other to satisfy the demands for existence, and giving them a double course over which they can be depended on to travel at such times as food is furnished at one loft and water at the other.

In England the homing pigeon is used to good purpose as message-bearer, but it is in individual service. Mr. W. B. Tegetmeier, General F. C. Hazzard, and Captain H. T. A. Allatt have been persistent in their efforts to induce the Government to adopt it as an adjunct to the national defense; but, while in all probability the bird will in time be added

the size, and to insure correctness in the copies extended use at home. "God help old England in the day she must depend upon the pigeon as a messenger of war," is the comment of Mr. John W. Logan, of Market Harboro, England's best fancier. "My experience," he adds, "has taught me that the pigeon cannot be depended upon as a means of communication in our foggy climate. On a foggy day the very best birds are useless." Still, the pigeon has done good service in the past. Its employment to-day is mainly to bring reports from off the water and from isolated or outlying districts and for sporting news. The saddest message that was probably ever carried was to an English father waiting at home to time the birds his little son, a lad of twelve, had taken away by train to liberate. birds were late, but when they came they all bore messages saying the little owner had been killed by an accident to the train, and as there were no identifying marks they had hoped to communicate with the relatives in this way. None knew the boy, except that he was a passenger on each half-holiday to fly his pigeons.

In 1882 Major-General Hazen, of the Signal Service, and Major J. C. Breckinridge, of the Department of the Pacific, gave the subject of the use of pigeons in our own country serious consideration,- the one for conveying warnings from the signal stations to isolated or distant centers; the other for communicating between stations in the West, and in Indian warfare. The result was a "Memoir on the Use of the Homing Pigeon," published by the authority of the Secretary of War, and issued at about the same time from Washington and the Presidio, San Francisco.

The comment of Lieutenant Birkhimer, author of the signal service edition, upon the information furnished him by pigeonfanciers was, "It is extremely doubtful if the use of the birds of even the best breeds would compensate for the trouble of caring for and training them." This was indeed hard lines for those who held to the belief that their birds were capable of anything, and that the world knew them to be so; and one of the faithful, Mr. E. H. Conover, of Keyport, N. J., at once engaged to show that his young birds, at least, had "endurance for more than 150 miles before October of the year in which they were hatched," and needed no such coddling as the paltry five-mile jumps with a rest between; and, for full assurance, took the course from the south-west, and asked the favor of the start from Washington of the Chief Signal Officer.

All of the birds engaged but one were less than five months old at the time of the first to the colonial service, it is doubtful if it has journey, and although they had been flown

around home, none had been over sixty regular means would not have reached them miles away when the trial began. This was until the third following. There are many August 15th, and from Elkton, Md., one hundred miles. From this every bird returned, and in good time. The next journey was on the 19th, from Havre de Grace, seventeen miles beyond. Liberated at 7:06 A. M. by Mr. R. Seneca, all returned at about the same time, the first entering the loft at 10:21 1/2 A. M. The next Friday the birds were sent to Washington, thus giving them over sixty miles of unknown country to cover before arriving at their last station. The start was at 5:28 A. M., and the first return, four birds together, at 10:49 A. M. Seven of the nine had entered the loft six minutes later. The returns were reported by message-bird to New York, where the report was made up, and the best speed reported to Washington by wire by noon; and to Keyport, twenty miles distant, by bird arriving before 12:45 P.M. Again all returned. The next journey was from Lynchburg, Va., three hundred and thirty-eight miles from Keyport, and with a hundred and fifty-five miles of strange country. The start was at 6:10 A. M. September 1st, by Sergeant John Healy. The first return was the Conover "Baby Mine" at 6:01 P. M., the first to return in any young bird season from over two hundred and fifty miles within the limits of the day of the start. The second return was at about seven o'clock the next morning. None of the Keyport birds were lost in these journeys.

In our country of magnificent distances and tardy messengers, pigeons are more largely employed as couriers than is generally known, inasmuch as the service is mainly for individual convenience. Very many business men in cities communicate with home in the suburbs by pigeon-post, or use the birds between office and factory. Farmers use them as messengers through the neighborhood, and from the post-office and the town. Country physicians often have an apartment prepared for the birds in their conveyance, and carry their birds on their rounds as regularly as they carry their instruments and their bottles, using them to bring word later on from their patients, and to send word home when there is need. And even the New York brokers promise to follow the example of Mr. A. De Cordova, who says, "I use my birds to bring the reports from Wall street to me at Chetolah, my summer residence near North Branch." Mr. R. D. Hume of Fruit Vale, Cal., claims to use pigeons with complete success between his factories, some three hundred miles to the north. Years ago certain of the from the nearest station the same day, that by evening.

prominent business men and capitalists in the vicinity of New York to-day who owe their prosperity to the foundation laid years ago through advices conveyed by pigeons in advance of the mail by stage.

The use of pigeons by Mr. C. T. Arnoux as message-bearers, in the yacht races of last September, proves conclusively the value the birds might have as messengers from off the water. The purpose was the thought of the last moment, and when almost too late to make the necessary preparations. The arrangements were hasty and the material homed at several centers, some of them miles away from the center of use. Still, with all drawbacks, insufficiencies, and mistakes, it was evident to the most prejudiced that with birds trained for the work, and with the atmospheric conditions at all favorable, the birds would six times out of seven prove to be of the greatest value; and failing the seventh, we would be only where we are without them. The messages were each not less than ten pages of manifold note, and were carried upon the middle feathers of the tail, to which they were fastened by fine copper wire, wound about and pressed flat, to hold the message close to the feather. The editor of a newspaper served by these pigeons said, "It gives me a peculiar sensation to receive copy from the hand of one I know to be out of reach upon the water, and to feel that he may talk to me but I cannot answer back. It is a wonder to me after this experience that the officers of any vessel, excursion steamer, yacht, sail or tug boat should be willing to leave the shore without this means of communicating with it."

Very many of the merchant marine, especially in European waters, have pigeons on board for use in communicating with the vessel from the small boats away from it or from shore. These birds, it is said, never mistake another vessel for their own when at dock or in the harbor. It has been remarked of several flights that the birds in exercising, when far out of sight of land, will go away for hours at a time, and upon their return will have dried mud on their feet and legs, showing them to have been upon shore.

Mr. A. P. Baldwin experimented with pigeons for sea service twice in 1885, and to his satisfaction. One bird liberated by Officer Croom of the Waesland at one o'clock in the afternoon, when three hundred and fifteen miles from Sandy Hook, was in the loft at evening. Another let go from the Circassia at nine Wells-Fargo agents in the mountains of Ne- in the morning, when two hundred and vada used pigeons to bring them the news fifty-five miles out, brought a message before



MAP SHOWING THE SEVERAL AIR-LINE ROUTES FROM THE WEST AND SOUTH-WEST.

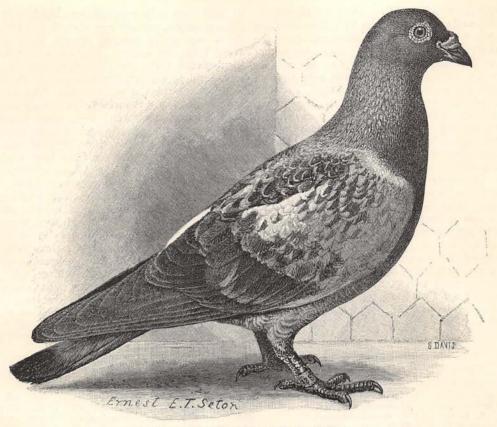
F	lace of Departure.	Place of Arrival.	Distance.	Name of Bird.	Remarks.
From	Stratford, Ont.	to Boston, Mass	. 510 miles	Darby	Mentioned.
14	Kansas City,	" Cleveland, O	. 704	Phil. Sheridan	"
	Indianapolis,	" Jersey City	. 630	Garfield	"
- 1	Columbus, O.		. 464	Columbus I. II. and The Devi	1 "
44	Steubenville, O.		. 334	Albright	Portrait.
-	Cresson, Pa.	" New York	. 243	The Nun	Mentioned.
-	Lynchburg, Va.	" Keyport	. 330	Baby Mme	Portrait in May, head in July.
-	717 - 1.7	" Northampton		Lady Florence	
41	Washington, D. C.	" Brooklyn		Little Jim	Portrait.
44	White Plains, N. Y.	" Utica	. 153	The Scamp)	
**	Utica. "	" Northampton	. 105	"	Mentioned.
**	Morgantown, N. C.	" Newark		Arnoux	
**	Greensboro, "	" Philadelphia	. 535	Lady Greensboro	Portrait.
44	Pensacola, Fla.	" Finadeipina	. 305	Red Whizzer	
44	rensacoia, ria.	" Newark	935 "	Arnoux	TOTAL CONTRACTOR OF THE PARTY O
- 44	Abingdon, Va.	" Brooklyn	508 "	Ned Damon	
44	Liberty, "	" Keyport	500	Steve	Montioned
44	Bristol, Tenn.	" Newark	. 350	Arnoux	····· stendoned.
44	Craigsville, Va.	" Fall Piver Mass	513 "	Hermit	Portrait
41	Jonesboro, Tenn.	" Fall River, Mass	205 H	Gladiateur	Mentioned
96	Charlotte, N. C.	" Keyport N. I	E00 (1	Pegram	44
44	Atlanta, Ga.	" Keyport, N. J	795 "	Atlanta Alabama	**
86	Montgomery, Ala.	" Fall River	.1040 **	Alabama	Portrait.
- "	New Orleans, La.	" Brooklyn	.TI50 "	Tried for)	(To show course taken by birds as
44	Boutte, "	" Keyport	TIE4 "		proven by birds being caught,
**	44 44	" Newark	.1167 "	"	To show course taken by birds as proven by birds being caught, and course air-line to home.
**	Key West, Fla.	" New York	.1240 "	Venture for July, 1886	
**	Jacksonville, Fla.	" Key West	. 410 "	Message service for daily pres	The state of the s
**	Tampa, "	** ************************************	. 245 "	aressage service for daily pres	

The line drawn from station to station along the coast is the course that will be taken for the distance journeys of this year, except for birds that drop to the south from Charlotte, N. C., when the next station will be Savannah, Ga.

its methods and magnitude in Belgium, where and were carried out in eleven hundred and it is the national pastime. There it is said six cars. The birds are sent away in such that one-fifth of the entire population are ac-numbers that special trains are made up for tive fanciers, while the majority of the build- them. Sunday is race day, but until the races ings have the dormer window which tells of of the day are decided no other thought the pigeon-loft beneath the roof. The extent or occupation has place with the average to which it is carried may be known when the Belgian. birds of a single province sent into France to be liberated during the six months of the sea- lofts is almost inconceivable, as the first re-

The sport of pigeon-flying is at its best in son of 1885 were over a million in number,

The speed attained in short races to Belgian



"ARNOUX." OWNED BY A. P. BALDWIN, ESQ., NEWARK, N. J.

turns in a few of the journeys from different in the pursuit, regardless of his accounterments. The morning press in comment hoped "if this distances in 1885 will serve to show:

Start from	Home.	Distance.	Time out.	The mile in
St. Quentin	Boussu	54½ miles 101½ " 70½ " 63 " 99½ " 215½ "	51 minutes '99½' " 65 " 60 " 80 " 181 "	56 seconds 58.8 " 55 " 57 " 48 "

It was at Ixelles, one of the most enthusiastic centers of the sport, that a company of the militia were at drill early in the morning, to be free at the time the birds liberated in the races of the day should arrive. All was well until the cloud of the returning birds appeared on the horizon, when there was an instant of uneasiness; then, all was forgotten but the wait- line; but one bird, at least, covered it the ing lofts at home, and as if with one impulse the company broke ranks and rushed at full speed toward the town. The officer, with his back toward the approaching birds, was speechless with amazement until he saw the cause; then, knowing how it was for himself, he too joined within the limits of the day, and the lofts were

should reach the ear of the authorities, they would recognize the exigency of the occasion and be lenient."

From St. Sebastian, Spain, to Liége, in 1862, was probably the most extraordinary journey ever made by homing pigeons. The distance was six hundred and fifteen miles, airsame day, as its marks were verified at the race-room before the doors were closed for the night. Fifteen others were shown early the next morning. It was not supposed to be possible for birds to cover such a distance

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without watchers. It is often asked, if birds in their haste to be first did not comply with can make such distances in a day, why can they not return from a thousand miles the third day at farthest? The supposition is that the bird travels through the first day without rest, but the next morning finds itself fatigued and, it may be, stiff and sore from its night out-of-doors and away from its accustomed shelter. That it does not at once resume its journey, but waits until it is refreshed and again in condition. A return from an extreme distance is never travel-stained or

The sport in America is not fifteen years old, and even of this the first seasons were given to the short-distance sweepstake races, popular among a certain class of the English. The first incentive to distance-flying was in 1878, when one hundred dollars in gold was offered to the owner of the first bird to return from a station five hundred miles away. The first attempt to win this was made the same year from Columbus, Ohio, to New York, four hundred and seventy-five miles, but both birds started were lost. It was the next year turns through the several years were:

the conditions, and the record made was lost. As a preliminary journey for the birds of New York and vicinity, they were sent to Steubenville, Ohio, three hundred and forty miles, and to the surprise of every one there were returns the day of liberating. The first bird home was "Francisco," owned by Mr. L. Waefelaer, Hoboken; time, eight hours eighteen minutes. Nearly a month later, when the entry was called for the Columbus race, six birds were offered, three from New York and three from Brooklyn. All six returned. The first to make the journey was "Boss," owned by Oscar Donner, Brooklyn, arriving before noon of the second day. This year the "Nun," owned by Mr. J. R. Husson, made the journey from Cresson, Pennsylvania, to New York, two hundred and forty-three miles, in two hundred and thirty-seven minutes,-the mile in about fifty-eight and a half seconds.

The effort from this time on was for a oneday journey from the Columbus distance, or " 500 miles" as it was termed. The best re-

FROM THE WEST.

Name of bird.	Owner.	Distance.	Time out.	Liberating station.	Date of journey.
C. A. Arthur Columbus I., II. The Devil	W. Verrinder, Jr. Jersey City H. Rover, Brooklyn W. Bennert, Newark F. Whiteley, Newark A. P. Baldwin, Newark G. Darby, Boston, Mass W. Bennert, Newark	475 " 464 " 464 " 464 " 510 "	26 h. 50 m. 50 h. 28 h. 13 m. 13 h. 42 m. 14 h. 10 m. 27 h. 26 h.	Columbus, O Columbus, O Columbus, O Columbus, O Columbus, O Stratford, Ont Columbus, O	Aug., 1881 July, 1882 July, 1883 July, 1883 July, 1883

FROM THE SOUTH-WEST.

Name of bird.	Owner.	Distance.	Time out.	Liberating station.	Date of journey.
Pegram Hermit Ned Damon	E. O. Damon, Northampton		23 h. 46 m. 25 h. 02 m. 28 h. 02 m. 14 h. 25 m. Third day.	Lynchburg, Va Charlotte, N. C Craigsville, Va Abingdon, Va Spartanburg, N. C.	June, 1884 June, 1884 June, 1885

that the real competition began. Philadelphia birds were first to be started, but their owners American birds are:

The records for distance journeys made by

Name of bird.	Owner.	Liberated from	Distance.	Time out.	Date.
Garfield Gen'l Sheridan Gladiateur Atlanta Red Whizzer China Bill Arnoux Alabama Montgomery	W. Verrinder, Jersey City J. C. Decumbe, Cleveland, O E. H. Conover, Keyport, N. J Samuel Hunt, Fall River R. L. Hayes, C. R. Hensel, A. P. Baldwin, Newark Samuel Hunt, Fall River	Ionesboro, Tenn.	630 miles. 704 " 725 " 715 " 935 " 1010 "	20 days. 52 " 10 " 9 " {12 " 19 " 26 " {20 " 39 "	1880 1882 1883 1883 1885 1885 1885 1885



LIBERATING THE BIRDS.

ever covered by a homing pigeon. the hawks and gunners.

The work of the bird Arnoux, mentioned above, during the season of 1885 was proof of ing journeys up to the first race amounted to were:

The last-named distances were the greatest about 150 miles. The races in which it engaged The were 130, 196, 272, 372, and 535 miles; in all, marvel for the performance is not that the 1655 miles. Sent later to 515 miles, and still birds should have returned from so many later to 1010 miles, it made the record for the miles, but that they should have supported four months of 3180 miles. It was sent later themselves by the way and yet have escaped still to fly from Boutte, La., but had not returned at the opening of the season for this year.

Other records than these which at the close what a good bird could accomplish. Its train- of the season of 1885 remained to be beaten

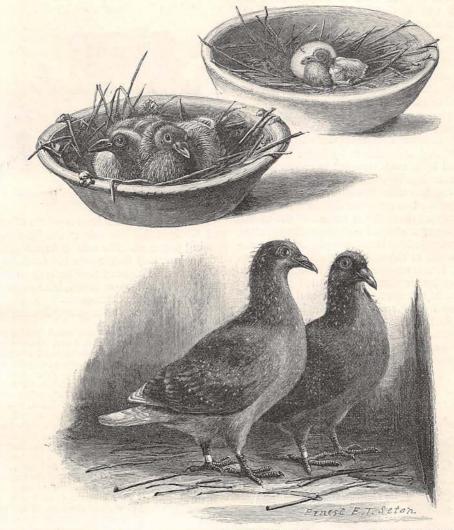
Name of bird.	Owner.	Distance.	Average speed.	Date of journey.
No. Six Little Jim Albright	J. D. Abel, Baltimore T. Cooper, Brooklyn M. B. Maguire, Brooklyn T. Bowerman, Irvington, N. J. T. F. Goldman, Brooklyn	100 miles 150 " 205 " 334 " 205 "	1384 yards per min. 1451 "" 1437 "" 1404 "" 1494 ""	July, 1883. May, 1883. May, 1885. June, 1883. Aug., 1884.



"ALABAMA," 1040 MILES, SEPTEMBER, 1885. OWNED BY S. HUNT, ESQ., FALL RIVER, MASS.
"NED DAMON," 508 MILES THE DAY OF LIBERATING. OWNED BY T. F. GOLDMAN, ESQ., BROOKLYN, N. Y.

It was in 1882 that young birds were first sent to fly from over 250 miles. The best results of the many efforts made each year to cover a greater distance within the day of liberating have been:

Name of bird.	Qwner.	Distance.	Time out.	Liberated from	Date of journey.
The Tormentor Baby Mine Twilight Lady Greensboro	F. Beard, Brooklyn E. H. Conover, Keyport J. G. Ward, Keyport J. McGauhey, Philadelphia	343 miles. 338 " 338 " 356 "	10 days. 12h. 1m. 25h. 7m. 9h. 18m.		



SQUEAKERS, TEN DAYS OLD.

SQUEALERS, THREE WEEKS OLD.

PEEPER, ONE DAY OLD.

The greatest distances to which young birds have been sent are:

Up to the nineteenth century varieties of the Eastern bird, the dragon, horseman, and

Name of bird.	Owner.	Liberated from	Distance.	Date of journey.	
Little Fritz Jay Gould Lexington	S. Von Moers, Brooklyn	Charlotte, N. C. Salisbury, N. C.	520 miles. 410 miles.	Autumn of 1884. Autumn of 1885.	

means the extent of the flying, but were those in which all were interested, and tend to show the progress made by American fanciers. There were, besides, club races to every center, home and home races engaging the birds of different cities, and journeys of venture.

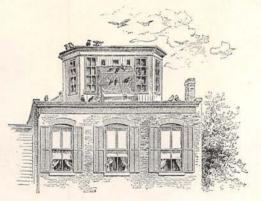
The journeys enumerated were not by any bagadotten, were used as flyers by the English, while the Belgians found their purpose served by the bird breeding naturally in the cornices of the public buildings and the outbuildings of the farms. Facilities for transportation were limited, and distances to be traversed were in consequence equally so. Speed was

sufficient for the ends of competition, and speed was attained. Development of the power of orientation was not necessary, as the bird could see its home, or at least known objects, from the height to which it would naturally rise. In these early days the birds were carried to the starting-point in hampers strapped to the shoulders of a man, and whatever the distance, it was a long and weary time for both convoyeur and birds. Sometimes, when the entry was large and the distance excessive. a cage of many compartments was built upon a cart, and this, drawn by horse or dog or pushed by a man, traveled to its destination. When the first birds were sent to Paris, one hundred and fifty miles, it was thought a foolhardy enterprise; but when the first bird returned it was carried through the streets of the capital upon a wagon draped with the national colors, and preceded by musicians playing upon violins, while at the street corners salutes were fired. It was an ovation to a hero, but was no greater honor than was accorded to the first return in the seven hundred and fifty miles journey from Rome a few years later.

As facilities for transportation increased the distances were extended, and new elements were brought into the composition of the bird to meet the greater demands upon it.

ENTRANCE TO THE LOFT OF H. DIENELT, ESQ., PHILADELPHIA.

The bird, in dropping upon the alighting-board, makes a connection which exposes it and the face of the clock to a camera, and rings a bell in the office in another part of the building.



PIGEON-LOFT ON THE ROOF OF THE RESIDENCE OF L. W. SPANGEHL, ESQ., BROOKLYN, N. Y.

The homing pigeon has no points of color, and for form the one rule is the likeliest for homing purposes. The rule in breeding is to cross colors, and find in one the qualities the other lacks. The head may be long or short, round or flat, narrow or broad, but somewhere in it there must be brain-room.

Mr. J. R. Husson, an inquiring fancier, said:

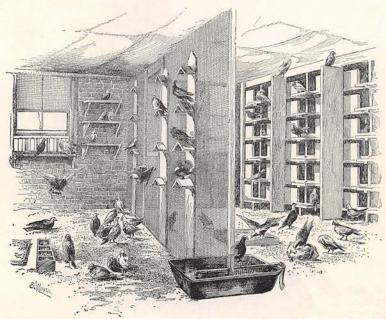
"I thought this head business worth looking into; so, when a very good bird died, I sent him to a phrenologist, and in due time we had a small addition to a host of skulls, from the human down, and this much

I learned. This little skull was shaped very much like the back of a human skull, and, unlike that of most animals and birds, was connected with the body at its base. I say like the back part of the human skull, for the brain of the homing pigeon is entirely in the back part of the head. Draw a line vertically through the eye, and we get the forward boundary of the brain. In the full forehead there is only bone. I say the brain is connected with the body at the base of the skull, as is man's. Now it is a fact that this is the connection of the most intelligent, whereas of the least so, be they birds or animals, the con-nection is at the back. Imagine a horizontal line backward through the eye, and we get the point of connection in the lowest species. The alligator, with head-capacity for a half-bushel of brains, has them all in an auger-hole running towards the nose and dwindling to a point. It is as we advance in the scale of intelligence that the spot of connection nears the base of the skull. Again, comparing this homer's skull with that of a common pigeon of the same size, we found at least one-fourth more brain-room in the homer, and the excess located more especially in the lower back portion.'

But wherever this brain is located, or whatever its quantity, its power must be evident in the eye. It is the eye, first of all, that and the fully developed power of flight. speaks to the experienced fancier. The white eye may mean the cumulet or the barb cross, but the latter will be easily determined by the shape of the skull, the eye-cere, and the build of the bird. If the cumulet, it means that of choice. The short, small wing calls for the bird will fly high, have great endurance and wing-power. If the eye is dark, the head round, and the beak short and close-fitting,

When a bird returns from a severe journey, these muscles are swollen and rigid, their size being greatly increased beyond the ordinary.

The wing in its shape is largely a matter more exercise of the muscles, hence is more easily tired. The texture of the web in some is coarse and parts easily, while in others one



INTERIOR OF COOP IN THE ARNOLD LOFT, NEW YORK CITY.

there will be a preponderance of the owl type; may cover the end of the finger with the persistent and intelligent home-seeker that will fly later at night than any other type. The red-eyed bird has the native Antwerp strong in its composition. If the eye is restless, and the pupil constantly dilates, it shows the bird to be far from inbred, but to be nervous and wiry, the result of the mingling of many bloods. If the eye is mild and beaming, there has been inbreeding, and not far away. But whatever the character or the color, the ball must extend beyond the line of the head, as shown in the bird "Albright," and be so placed that the bird has as good a view of what is behind as before it. When a bird returns from a journey over much new territory, this protrusion of the eyeball is greatly increased, showing to what great strain the powers of vision have been pushed.

The chest should be full and broad:

and whatever the cross, the result will be a feather without its breaking. When the feathers of the wing are in prime condition, the web of one, as it laps over another, almost adheres to it, and the quill and shaft are tough, not brittle. The bath-tub is an absolute necessity in the flying-loft, that plumage being in the best condition which is oftenest washed. A wing is made up of ten flight or primary feathers and ten secondaries. The moult is so gradual as never to interfere with the flight, one feather dropping at a time, and being almost replaced before another falls.

The tail of the pigeon acts as the rudder in a flight, and should be of good length. This length is increased by pulling out the

feathers in the first year.

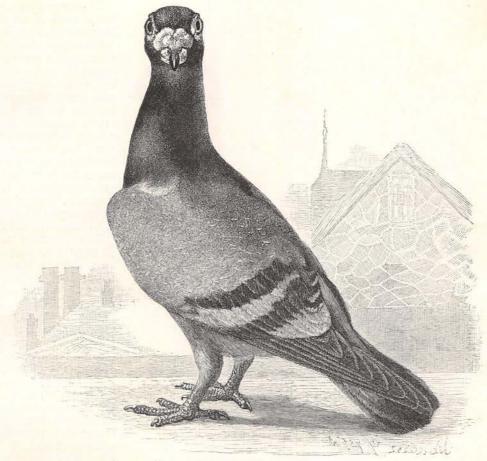
The legs of the homing pigeon are preferred free from feathers. Both legs and feet are red. An Arabic legend tells us that the bird with the olive-twig returned to the ark with breadth is especially essential, otherwise the red mud on its feet and legs, and this so wings will be too close together to have the enhanced its beauty that the good Noah, in muscles which give the fullness to the breast his joy at once more beholding the soil,



RACE-MARKED FEATHERS, FROM "BABY MINE."

morning until night. To prove this, when birds were killed en route, as it sometimes happened, and were reported, in one instance after an all-day journey, their crops were examined and the contents were but slightly changed. As in each instance the food in the crop was the gray Canada pea, the peculiar small corn, and the hempseed that had been sent with the birds, and fed to them before the start, there could be no mistake. The habit of the wild bird would seem to demand some such provision. The "dove-house" resides in the city squeaker or the squealer. Both Audubon and

buildings, and the blue rock nests upon the cliffs, both far from their feeding-places in the fields. It is the habit of the family to feed the young with food carried in the crop and to be disgorged for them. Unless the operations of digestion were discontinued during the journey from field to young, it would seem difficult to provide the nourishment required for the



"ALBRIGHT." OWNED BY T. W. BOWERMAN, ESQ., IRVINGTON, N. J.

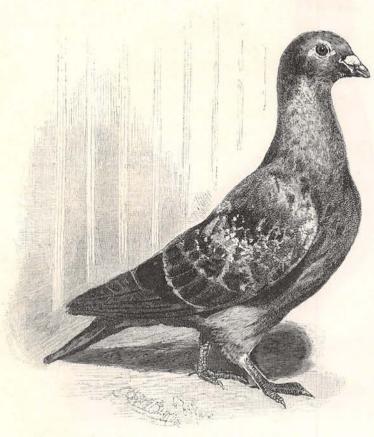
source of such food. My inference from my experience with the homing pigeon would be that the condition was no test of the time which had elapsed since it had last eaten, but if unchanged or nearly so, that the flying had been continuous. This question is of much importance in pigeon-flying, since, if the food remains unchanged, the system has no need of it, and it is therefore useless to give the added weight of a full crop, to bear as it must upon the muscles of flight.

The color of the young homer is problematical, since the parents may represent many types. But whether it will be dark, light, or white may be guessed at by the quantity of down upon it. If dark, it will be well cov- not begin before March of any year, and "the ered; if light, less so; if white, it will be naked. bird must squeal when stamped." The seamless The youngster flies strong and well when ten bands are large enough for the leg of the adult weeks old, but four months is quite young bird, but cannot be slipped over the foot of a

Wilson base the speed of the American bird enough to begin its training. The age is Ectopistes migratoria upon the sort and condi- required for intellectual development rather tion of the food found in the crop of specimens than for increased wing-power. To start a shot many hundred miles from the nearest loft, one must either purchase breeders and keep them prisoners, with a wired-in area for exercise, or youngsters just from the nest which may be given their liberty almost at

The pigeon matures so quickly it soon loses the nest-marks, and may be mistaken for an adult while still a youngster. A young-bird record is one made in the autumn of the year in which it is hatched. To keep out the autumn and December birds of the previous year, with their added months of experience, "young birds" must be marked either by seamless bands of brass upon the legs when in the nest, or by marks placed upon the wingfeathers when squealers. This marking must

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"LADY GREENSBORO." OWNED BY J. MCGAUKEY, ESQ., PHILADELPHIA.

bird more than a week old. The mark upon these is changed each year, but the mark is not fixed upon for the year until after Christ-

mas of the year previous.

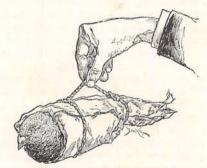
The races of a series are generally six, beginning with seventy-five miles and closing with five hundred, with an interval of a week between all except the last, when there is a fortnight's delay. The journeys previous to the races are known as training stages, and are of five, ten, twenty, and forty miles, with a day or two between them. These are to teach the birds first to leave the basket and go home, next to give them confidence, and finally to insure the exercise necessary for condition. The really-in-earnest fancier, however, flies his birds almost continually about home. There is a basket just fitting under the seat of his conveyance or at the back of his business wagon; or he carries a pet bird to toss in his pocket or as a paper parcel. The training journeys for old birds are mainly for the exercise and to get them into condition for the hard work that lies before them.

In pigeon-flying no one's word is taken. but the rules governing the journeys demand disinterested management in every particular and the most complete proof. This is not because of the Talmud's assertion that "flyers of pigeons are liars," but in order to have the answer in unimpeachable evidence to every question that may arise. Everything pertaining to a race is in writing and attested.

The proof of the journey is in the private mark placed upon a feather of the bird's wing by a disinterested party, and that cannot, by the precautions that are taken, be known to any one interested in the result until seen on the bird's wing after liberating. This mark is shown in the combination following the name of the race station in the wing of a record bird. This wing is as that of the bird "Ned Damon"

of Brooklyn appeared at the close of the season of 1885. It has not the mark of the first race of the series, from Philadelphia, eightyone miles, the feather bearing this having been shed and replaced.

The countermarking and shipping is generally the second day previous to the race date. Before sending away, all baskets containing the birds are inspected, and after being sealed are delivered to the express. The liberators



BIRD TIED UP FOR REPORTER'S USE.

are always responsible gentlemen who are selected and instructed in their duties by a disinterested party. No identifying mark except the race secretary's name is permitted upon the feathers of a race bird; thus if caught en route the owner cannot be communicated with.

The "time" of return is not when the bird alights upon home property, but when it is secure beyond retreat in the loft. The entrance for the bird is by raising a pair of wires hung from staples at the top. These "bobs" swing in free, but falling against a ledge prevent the

egress of the bird. The click of this "bob" at the loft. If the return is reported by telegram, the time given is that at which the message is delivered to the operator and which is included with the countermark in the message. From this time is deducted the allowance for reaching the office from the loft, to find the time of arrival. The competition in all onecases, fly after sundown, this method does not apply to second-day journeys, when actual time out is taken

instead. There was formerly a rule in flying that a bird should not be liberated within a certain distance of a race station before the race; but it was found that birds made the best speed over unknown territory, and the repeated journey from a station was never in as good time as the first.



CATCHING-NET, TRAINING-BASKET, AND WATER-PAN.



HEAD OF "LITTLE JIM."

The attachment of the pigeon is not for after a bird as it enters the loft is the signal mate or young, but for its home, its perch, and for "time." This time is taken by a referee its nest-box. The homing pigeon is peculiarly possessed with the proprietary instinct and a dislike of change. The first place it selects in a loft it holds to the end. An owner knowing his loft can go in the dark and tell the bird he touches by its location. A bird absent for years takes its old place upon its return. But holding to its own to the death does not deter day journeys is for average speed. This is it from adding to its possessions. A lively obtained by dividing the air-line distance young bird will sometimes defend his own covered by each bird by its time of flying. peculiar belongings and at the same time at-As the bird does not, except in extreme tempt to occupy a line of perches and a tier of nest-boxes to the exclusion of others. It is a holiday in the loft when the king bird of it is sent away upon a journey, and his rival in possessing himself of his apartments leaves some other site free for another; but it is war when the owner returns, and however weary he may be he does not rest until the intruder is expelled and his belongings thrown out. A bird will accept a change of mate, will not grieve for loss of young or eggs, but it cannot be made to occupy new quarters so long as the old exist. It will submit to removal to another loft, and if when it "visits" the old home it is ill-treated it will return to the new home of its own accord, seeming to understand what is required of it; but the place that is its own in either it will not willingly yield to another. Birds have been known to be content in a new home, and yet to return to the old to dispute the possession of the old perch and box.

> The much-discussed question of the homing of the pigeon, or, as the French term it,



"RED WHIZZER." OWNED BY R. L. HAYES, ESQ., PHILADELPHIA.

one who has had much to do with the birds. There are, however, as many theories advanced as there are scientists who have studied it. One ascribes it to a sense of which we are not cognizant; as if the senses were six and man had knowledge of but five of them. Another finds a path for the birds in the magnetic currents of the atmosphere, another in its currents of heat and cold. Some rank the impulse with the instinct of the migratory bird, while others ascribe the performance to sight, and others again to luck and chance. The facts do not bear out any of these theories. The atmospheric direction, not their temperature, and they not uncommon phase of the bird's character,

hinder as often. The magnetic currents may affect, but it is in stimulating and intensifying, or, as they are adverse, in depressing. It is not instinct. Instinct is involuntary and unerring. Guided by instinct, the bird would not go astray, and the element of uncertainty upon which the sport depends would be lost. The homing pigeon not only errs, but shows indecision. Thus its action is voluntary and the result of a sort of reflection, and it is as the premises of which it takes cognizance are imperfect or false that its action is in error.

The sight of the homing pigeon is only limited by the dip of the horizon and the altitude at which

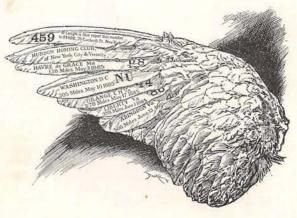
it can sustain itself in the air. Its memory exceeds human understanding. Thus a bird will rise from a basket and be over a strange place only long enough to go away from it, but, if it feels itself to be lost, is injured, or is unable to proceed, it will return to the place of the start.

Eighteen Keyport birds liberated in Charlotte, N. C., in the spring of 1884, were kept in the upper room of a hotel while waiting for the time of the start. All left the roof together at five A. M. and went away out of sight towards the west, but soon returned, and after circling over the hotel took their direction towards the south. Again they returned, and after taking several wide circles over the city took an air-line course towards the north-east, going out of sight at half-past six o'clock, at great speed. A few minutes later six came back and settled upon the Masonic Temple, opposite the hotel. Three of these went away later in

orientation, does not seem difficult to meet to the day, but the other three returned through the open window to the room of the hotel in which they had been kept.

The little travelers were being watched for at Greensboro, nearly a hundred miles to the north; but when at half-past seven o'clock the twelve passed over, flying very high and with almost incredible swiftness, there was doubt expressed as to their identity, as the birds to be started numbered eighteen. The little travelers, to have been over that city at that time, must have traveled at the average speed of a mile and a half to the minute.

Another instance of intelligent although currents may aid, but it is by their velocity and misdirected purpose will show another and



WING OF A RECORD BIRD.

if so we may term it. "The Scamp" was sion of the nest-box in which "The Scamp" Utica, N. Y., when a squealer. In due time it tled themselves in it for housekeeping. was put upon the road, and it returned regularly from all of the journeys up to that from eon in its vagaries and its methods leads me of White Plains. The bird, sent home by ex- that its superior organization of brain perto have forgotten its escapade, and when liberated was seemingly the most contented bird of the flight. One morning, however, he breakmate to fly with him to Utica, one hundred it answers to the demand of the governing and thirty-eight miles away, where they impulse of its nature - the love of home. were found at noon. They had taken posses-

purchased by Mr. E. O. Damon, Northamp- was hatched, after dislodging its occupants ton, Mass., from the loft of Judge Willard, and wrecking their belongings, and had set-

My long experience with the homing pig-White Plains, N. Y., one hundred and five to rank its performance as the highest act of miles south-west. While its owner was watch- which an animal is capable, and to believe ing for it from this start, he received a tele-that it is not to be ascribed to the blind guidgram advising him of its presence in Utica, ance of instinct or intuition, but that the bird one hundred and fifty-three miles north-west is entirely dependent upon its intelligence; press, was kept a prisoner until it was thought mits some sort of mental direction to its actions of which others of the animal creation are not capable; that it is by its keen sight and wonderful memory, directed by its intelligence fasted in Northampton, then persuaded his and poised by perfect physical condition, that

E. S. Starr.



SONGS AGAINST DEATH.

EATH lieth still in the way of life Like as a stone in the way of a brook; I will sing against thee, Death, as the brook does, I will make thee into music which does not die.

As the woodpecker taps in a spiral quest From the root to the top of the tree, Then flies to another tree, So have I bored into life to find what lay therein, And now it is time to die, And I will fly to another tree.

Look out, Death: I am coming. Art thou not glad? what talks we'll have. What memories of old battles. Come, bring the bowl, Death; I am thirsty. 1886.

He passed behind the disk of death, But yet no occultation knew. Nay, all more bright therethrough, As through a jet-black foil and frame Outshone his silver fame.

Leap through the Mystery of death as the circus-rider leaps through the papered hoop . . will we find Life ambling along beneath us on the Other Side?