

the cat. Witness replied that he was not going to shoot the cat; he had nothing to do with that. He left the cat in the cote and took seven pigeons out, and showed them to the defendant on the Saturday morning, but defendant refused to look at his cat. Plaintiff kept the cat until Sunday, after dinner time, and then let it out. He had driven the cat away scores of times. The cat was there on the previous Monday, as witness had got some more pigeons. He had polished off all the others.—The Judge: How do you know?—Plaintiff: I found the feet of two others with rings on.—Cross-examined: Plaintiff said his cote was 8½ ft. from the ground. The reason he did not go in the cote in the morning was because he had not time to fetch the steps. No rat could get in the cote. He had no doubt all the pigeons were worried in the morning. He took seven dead pigeons to defendant. Some of them were in good condition—five were perfectly straight. He sold the seven for 2s. 6d. Six of the birds were worth 10s. each, and he had paid 75 francs for them in Belgium.—The Judge: They were Belgian blue marks. What did the other three cost you?—Plaintiff replied 2s. 6d. each at Cork. He said he was only charging half the value of the pigeons, as defendant was a neighbour of his.—The Judge (to Mr. Turner): I think he is treating your client very leniently.—Mr. Turner (after consulting with Mr. Bower) said the parties to the suit were neighbours—living only 40 yards apart. His client thought it was rather rough for plaintiff to keep his pigeons so accessible to the cats.—The Judge: Is not the boot on the other leg. He should cut the cat's claws so that it would not go and kill £3 worth of pigeons. It might have been content with tenpenny ones, if not you will have to pay the piper.—Mr. Turner: But there were only six worried in the morning, yet he did not fasten the door.—The Judge: It was no use locking the murderer out.—The plaintiff: They were all killed in the morning.—Verdict for plaintiff.

IN his work, "Natural Inheritance," Mr. Galton explains a graphical method of "showing how to determine the grade of an individual among his fellows in respect to any particular faculty." I have thought it might interest pigeon flying men if by the same method I constructed a figure by which the individual grade or figure of merit of a homing pigeon could be ascertained in respect to its flying velocity, among not only its fellows of its own loft, but also among the bulk of the pigeons of other lofts. Two tables and a figure made from them are accordingly given. The tables are not necessary, but I give them to show how the figure was arrived at. Table I. refers to old birds, and by means of it the upper curve A B is drawn. Table II. refers to young birds, and from it the lower curve A B is made. By the aid of the figure then we are able to compare—(1). Any individual old bird whose mean flying velocity for an average distance of about 141 miles is known with old birds either in our own loft or with nearly all old birds which flew last year to other English lofts. (2). Any young bird of last year in the same manner. (3). We can compare old birds with young. For example—We have an old bird which has made a mean velocity of 970 yards per minute. From the point 970 on the perpendicular at C we carry a line horizontally till it meets the upper curve A B. From this point of intersection we drop a perpendicular to meet B C, and we find it meets it at the grade 50. In other words, as compared with all other old birds our individual bird is of mediocre rank, 50 per cent made higher velocities, 50 per cent lower. Again, we possess a young bird with a mean average recorded velocity of 850 yards per minute. A horizontal from this point to the lower curve A B, and a perpendicular dropped as before,

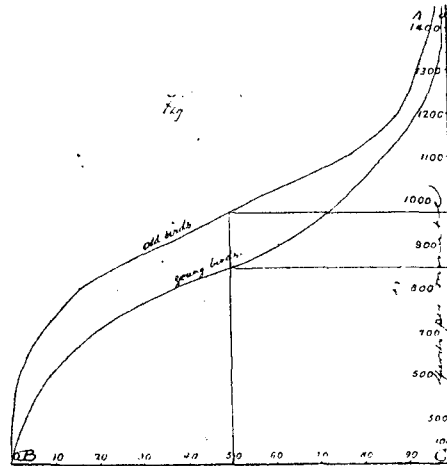
gives to our young bird also mediocre rank, i.e., 50 per cent of other young birds were faster. And to compare old birds with young we can readily see that the average old bird makes a velocity of 120 yards more per minute than the average young bird. These curves of distribution, as they are called, vary little from year to year. That is to say curves made from the records of the coming racing season will practically be the same as those here given. In process of years we shall undoubtedly see a difference. The average old bird, say in ten years time, will make a higher mean velocity than 970 yards, presuming, of course, that we breed and breed only or in most part from the fastest birds of the present time.

TABLE I.
Velocity yards per minute.
3207 old birds flying over 90 mls. (av. 141 mls.)

Velocity. Yds. per min.	No. of cases observed.	No. of cases observed.	Percentages.
Under 500	22	6	6
" 600	43	13	19
" 700	164	53	72
" 800	284	88	16
" 900	598	186	34
" 1000	645	203	54
" 1100	683	213	76
" 1200	396	123	88
" 1300	132	43	92
" 1400	120	36	96
Over 1400	120	36	100
Total	3207	100	

TABLE II.
2914 young birds flying in races between 50 and 100 miles.

Under 500	107	3.6	3.6
" 600	154	5.3	8.9
" 700	297	10.3	19.2
" 800	543	18.6	37.8
" 900	634	23.4	61.2
" 1000	415	14.3	75.5
" 1100	284	8.3	93.5
" 1300	114	3.9	97.4
" 1400	49	1.6	99
Over 1400	29	1	100
Total	2914	100	



ON PRISONERS.—Some considerable time has elapsed since we had a chat with our younger friends in the fancy. They must not, however, conclude that we have ever been unmindful of them, much less that we have at all forgotten them. The increasing needs of the sport, which have continually drawn more and more upon our space, have put it out of our power to add to the periodical suggestions for the benefit of our younger brethren, which it formerly gave us so much pleasure to offer. We cannot, however, put off indefinitely what we feel to be something of a duty on our part, and

what in reality was one of the foundation stones in the mission of this journal. With thus much of apology, we beg this week to offer to the junior section of our English fancy a few remarks culled from a Belgian contemporary on an important department of colophillism, important because bearing directly on the founding of new lofts. The article is as follows:—"To begin, then, with the assumption that the young fancier has passed through the initial stage of loft founding, he will naturally turn his mind in the progressist direction as regards the quality of his birds. It is certain that there are many ways open to him for effecting his purpose, and it is even more certain that a good deal of laborious work awaits him. But whatever may be his particular *modus operandi*, he will, under almost any set of circumstances, have to encounter one detail, incident more or less to all modes of operating, viz., that of keeping certain favourite birds in confinement, and it is to this matter we would wish to draw his careful attention. The important part which confinement plays in the conservation of races is so great indeed that it is indispensable to study it in its smallest details, so as to guard against certain principles which may, in their application and after a little time, ruin the very best collection of pigeons. In examining how nature proceeds, the question often puts itself to us as to how it is that so many categories of birds, which in the wild state are possessed of brilliantly prolific qualities, should breed with so much difficulty when domesticated, and subjected to comparative imprisonment? The study of re-production in the case of the homing pigeon has long since proved to us that this phenomenon has been modified by the altered conditions of life imposed upon it, and we are bound to conclude that in its domesticated state, its breeding powers have been considerably affected. By what we have already called confinement, the prolific qualities are sensibly diminished, and issue or progeny obtained, seem struck in their development by the destructive principles inherent in the new surroundings. The pigeon kept up within a restricted space is subjected to influences which irresistibly deteriorate its constitution, and forcibly weaken its intellectual qualities. The want of exercise brings on atrophy of the wings, and an exaggerated development of the feet and legs; the want of fresh air and limpid water hinder its growth, and injuriously affect its health; the want of certain calcareous products is in antagonism to different internal combinations; moroseness, the result of isolation and monotony, takes away all the ardour and fire which are so necessary to good conceptions. It is evident that in these conditions, so advantageous to the prosperity of a race as they are, breeding pigeons must receive a mortal blow, and that the unfavourable elements attendant on such an existence as that we have described must be transmitted to all issue born under them after a certain period; physical forms alter, and in their modifications carry death to the qualities dependent on them. Sequestration suppresses exercise of the wing, as we have already said; it follows that this part of the flying apparatus loses its qualities in the sense of development and resisting power, and that after a certain lapse of time the degeneracy in this particular will make itself felt in the descendants. To be convinced of this needs only to compare offspring begotten before seclusion with that begotten after. In like manner the feather, which renews itself so easily when the bird is in the enjoyment of its liberty, is unfavourably modified in its operation even in no longer a period than that of a year. Instead of being smooth, silky and permeated with a whitish oil, the sign and token of health, the feathers become dry, their dimensions contract on the surface, and instead

HOMERS.

LECKHAMPTON LOFTS.

SQUEAKERS.—J. Barrett, Nursories, Leckhampton, Cheltenham, whose breeding stud of sixteen homers recently cost over £70, wishes to dispose of a few youngsters at a reasonable price. The birds comprise three recently purchased from H. Stanhope, Esq., a granddaughter of Old Aberdeen, and others of his strain, Cove's Banff Cock, Price's Thurso Hen, a daughter of M. Jurion's Old Bayonne, a daughter of M. Pletinckx' Renowned Mealy, a granddaughter of M. Delmotte's Old Mealy, the father of Thirionet's winner of two Grand Nationals, relatives of Voliere, Old Red, etc.; and include the following winners—special, cup, and 2nd for best average velocity, 1st, 2nd, two 3rds, and 6th Berwick, 3rd, 4th, 6th, and 7th Arbroath, 2nd Banff, two 1sts and 1st series Leeds, 1st and 3rd Derby, 1st Sheffield, 3rd, 5th, 9th, and 14th Newcastle, 3rd and 5th Durham, 7th Northallerton, 8th York, etc. Young from untrained birds in flyers' loft, 10/- pair. Others, 15/- to 80/- Lists free.

THE HURST Loft.—I am now booking a limited number of Squeakers bred from birds that have won five silver cups, two medals and other special prizes, 1st Avranches, 1st and 4th Cherbourg, 1st, 4th, 5th and 7th Bournemouth, 1st and 2nd Swindon, 1st and 3rd Worcester, 2nd Cheltenham, Ashton, Denton, and District Homing Society. Prices from 10/- and £1 per pair.—Apply to Mr. John Cooke, 162 Bentinck street, Ashton-u-Lyne Manchester.

THE CHIPPENHAM LOFT.

SWAIN & PERRY, 42 Causeway, Chippenham, having more young birds than they require, can spare few pairs at 10/- and 15/- per pair; strains Swain's gold medal hen, Penzance race, 1236 yards, Hedges, Gibson, Malins, Gainer, Heap, &c.; none but genuine healthy birds sent; particulars given.

THE MORECAMBE LOFT.

R. SWAIN will have a few more youngsters ready in a day or two, rung with Preston and District ring, — Apply 23 Euston-road, Morecambe.

JOHN DAY, whose birds are so well known throughout the United Kingdom for speed and stamina, can supply pairs of squeakers able to take part in the keenest competition in either short or long distance races; also can dispose of adult, either sex; best flying blood only kept. P.S.—Every fancier should read his practical illustrated work on the Working Homer, a most valuable book for beginners. Price 1/1.—11 Waterloo road, London.

W. DUCKWORTH, 2nd pool (which was 2nd bird back) from Nantes, 1893, with Stacksteads Society, and the following prizes in the Bacup Society, 2nd and 3rd Jersey, 1st, 2nd, 6th, 7th, Cherbourg, 1st and 3rd Ventnor, 1st Chippenham, and many others, has all his last year's young birds for sale, many prize winners, bred from my champion Nantes cock, who has won eight prizes out of eleven races, and a daughter of Old Boley, Kaye's black cheq, and pure Logan. Trained birds, stamped, 15/- to £1 each. Untrained, same strain, 10/- each. Squeakers, which must be ordered, 10/- a pair.—Apply to Wm. Duckworth, c/o Mr. Cardus, Bank, Bacup.

SQUEAKERS, best obtainable, a few choice ones ready in a few days, bred from birds direct from Alderman Gits and N. Barker, Brussels, nominal prices, printed list free, grand chance for beginners.—F. Tanton, Fairview, Tonbridge.

W. ALLEN, Clark's lane, Willenhall, having sold all the 50 birds advertised, will sell any young bred in 1894 from £1 to £1 10s. per pair. See advertisement Dec., 1893.

HOMING NEWS

And Pigeon Fanciers' Journal,

FRIDAY, APRIL 6, 1894.

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MR. W. WRIGHT, 3 Halstead-road, Seacombe, has bought from Mr. James Girven, Red Cheq Cock, bred by Mr. W. Allen, Willenhall; own brother to No. 12 on his 1890 list; sire Sandy, dam Logan 539. Also Blue Hen, white flight, bred from 9 and O 32.

MR. WM. TAYLOR, the hon. sec. of the H. P. P. S., requests that we will call to the recollection of subscribers and fanciers generally, the fact that subscriptions to the society are already overdue. He has a somewhat lengthy list which he is desirous of publishing, but as the names of many old members will be absent if he does so in the present issue, he has decided to wait another week for additional subscriptions. "More mischief's wrought for want of thought, &c." is very applicable to the subject under review at the present juncture, and we trust that old members, and intending, will without further delay remit to the hon. sec. their subscriptions for the present year.

A SIMILAR appeal may also be made on behalf of our list of liberators, which has already assumed modest dimensions, although not nearly as complete as we should desire it to be, before presenting to our readers.

HOMERS for Naval Purposes.—Arrangements are being made both at Devonport and Portsmouth for the carrying out of experiments with Homing pigeons with a view to training them for the transmission of naval despatches. After the birds have been so trained as to gain a thorough knowledge of their respective localities, they will be sent out in vessels undergoing steam trials, and it is expected that before the next naval manœuvres they will be sufficiently educated to undergo practical tests. It is intended that the two dockyard ports shall as far as possible co-operate in carrying out the system.

THE tables and diagram that appear in page 138 of your issue of March 23rd, will be acceptable to many besides those who are specially interested in carrier pigeons. It is much to be desired that similar tables were compiled of all competitive performances of bird, beast, and man, as I have urged and explained in a short paper published in the "Hints to Travellers" of the Royal Geographical Society. It is I trust becoming popularly understood, that all such series as those in your tables conform with considerable precision to the law of Frequency of Error, the effect of which is that any one series, however large, may be completely expressed in all its details, and with sufficient accuracy, by only two numbers; in the case of your first table those numbers are 976 and 124; the first defines the average, the second defines the variability. These two cardinal numbers can be declared with somewhat less trustworthiness, from any two of the data in the last column of your table, as from these:—"16.0 per cent. of the birds flew less than 800 yards per minute, and 76.2 per cent. less than 1100 yards." To show how well the calculated results from the two numbers in question agree with the observed facts, I give the observed number of cases, as in your second column, but reduced to per cents., together with the calculated numbers below them. In the observed cases, I have taken small liberties with the two figures marked with asterisks, in order to give a greater smoothness to the series. The real value of the entry 13 is 12.3, that of 3 is 3.7. I have treated these as if the one was 0.3 higher, and the other 0.3 lower than observation made them.

observed 1 1 5 9 19 20 21 13* 4 4 3*
calcul'd 1 1 5 10 17 21 20 14 7 3 1

A classification based on the class place has the great advantage of being of universal application, and intelligible to all. Thus there can be no doubt as to the meaning, when we say that so-and-so ranks among the first ten per cent. of his class, while if we say that such a bird flies 1350 yards a minute, or such a man jumps across twenty-one feet, the information is only intelligible to an expert. Dr. Venn, in his analysis of the physical powers of Cambridge men, has made much use of a division into ten classes, which has the merit of being simple, and neither too refined nor too coarse for ordinary statistical purposes. I have calculated the limiting values of the ten classes of the homing pigeon, and give them below, in the belief that they may interest naturalists as well as the statisticians who are now occupying themselves with this class of subject, such as Dr. Venn, of Cambridge, Prof. Edgeworth, of Oxford, and Profs. Weldon and Karl Pearson, of University College, London. I should

mention that I have taken the data blindly from your tables, assuming that they are trustworthy, and having no other knowledge whatever of them.

Old Homing Pigeons flying over 90 miles.—If any large number of these birds be divided into ten *equally numerous* classes, in the descending order of their performances, the 1st class being the slowest, and the 10th class the fastest, then the limiting values of the performance of each class would be as below.

No. of the Class.	VELOCITY OF FLIGHT.	
	Yards per min.	Miles per hour.
1 (slowest)	below 740	below 25½
2	740 to 821	25½ to 28
3	821 to 879	28 to 29
4	879 to 929	29 to 31½
5	929 to 976	31½ to 33½
6	976 to 1023	33½ to 35
7	1023 to 1073	35 to 36½
8	1073 to 1131	36½ to 38½
9	1131 to 1212	38½ to 41½
10 (fastest)	above 1212	above 41½

A bird whose performance happened to be identical with any of the above numbers, would occupy a transitional place between the two classes which the number divides. It might with equal justice be placed as the last bird in the class next above the limit, or as the first bird in the class next below it. There is no natural break between the classes, but only an arbitrary one, as the values in every large series of performances run continuously.—FRANCIS GALTON.

P.S.—In the data in your second table which relates to young birds, I notice that a line has dropped out. The totals enable it to be replaced, it is “under 1200—238 cases.”

THE following recently appeared in the *Revue Colombophile* in reply to an enquiry “Can pigeons home in the dark?” “From the context of the letter we have received, the fancier in question is evidently contemplating the idea of putting his birds to the test in this matter. Seemingly then, it is not enough to break the backs of our faithful subjects, with what we put upon them throughout a whole five months of the year, nor enough even on the top of this, at any rate with some people, to inflict winter campaigns and concours upon them, but we must exact midnight promenades. In principle we regard the idea as much worse than a mere absurdity, but there is nothing new in it. Night races have been known and organised long ago in Belgium and even in the northern provinces of France. Our Homer certainly can travel in the night time; it is a question of training. What is it indeed that fanciers commonly do on the eve of a great race? They toss their birds some miles away towards 7-30, 8-30, and even nine o'clock in the evening; sometimes absolutely in the dark. And why? Because it is desirable that when the bird takes part in some race of importance, and of legitimate character,

it should not conclude that its day's work is finished before the stars begin to glisten in the firmament. Impressed with this idea, a pigeon trained as we have just mentioned, will find its loft again on the day of toss, when the distance to be flown, will take the average bird until the early hours of the morning after. The latter bird, will make for and beat down upon some shelter for the night, as soon as twilight comes on. A friend of ours at Lille last year, in one of the great races of the season, awaited his bird, and had the satisfaction of welcoming it in its loft at 10 o'clock on the night of the day it was tossed. It becomes clear then, that by training, the pigeon may be brought up to the pitch of dead of night work. But we are not to conclude from this, that it is endowed with the same gift as the bat, that only goes through its gambols during the hours of phantoms and sorceries; that its eyes have the faculty of piercing the darkness through and through. The pigeon cannot see in the dark, as any one may prove who has occasion to go into his loft in the night time, and who in so doing frightens some member of the loft so that it will fall from its perch. It will remain on the floor, unable to find its accustomed place on the perch until daylight. More than this, a hen even when covering the eggs that are dear to her, if she should happen to quit the nest in the dark, cannot recover her way back in the dark, to the objects of her solicitude, although no more than a couple of feet distant from them. We here graze the delicate and mysterious subject of orientation. When a bird takes its flight through the dark shadows of night, it is not sight that guides it; it directs its course as its instinct impels it, just as a man hypnotised, and his eyes bandaged, makes towards the object determined upon for him, by the magnetiser, medium, magician, or whatsoever name you may call the controlling power. When storks, cranes, teals, and wild ducks and geese are in the act, during their migrations, of crossing immense stretches of sea, it constantly happens that hosts of them dash themselves against our lighthouses. When quail leave our shores in order to cross the mediterranean sea, which with their slow and heavy wings, they cannot do in any single day, it inevitably follows that they must travel day and night. These migratories, without the aid of sight, follow an indefinable magnetic current, to which, repeated experiment, training, &c., brought to bear on our pigeon, would equally accustom it. This is the only logical basis on which to found our conviction, that by judicious and progressive trainings, the homer pigeon would infallibly succeed in finding its loft without being able to see a single atom of it. Moreover, we do know that pigeons in myriads exist on the American continent,

that regularly do this very thing. They belong to the class migratory, and they pass from one quarter to another of that immense continent, at all hours both of day and night, light and pitch dark; and it is, that these birds in their wild state have preserved and developed a quality, which still rests in the temperament and constitution of our homing pigeons, themselves the descendants of the wild stock dove. Our correspondent may proceed with his experiments. As we said at the outset, others have tried the same thing before him, and have obtained very surprising results.”

INCUBATION.—The following constitutes a string of phenomena of the most interesting character at the present season. Our readers will gather with pleasure, and we are sure, with advantage, what are the fruits of considerable study and observation on the part of the author, Mons. Eloire, who has presented his writings to the Aviculteur of Paris. Albeit that Monsieur Eloire is treating, in the present instance, of birds other than pigeons, his observations are full of interest, and abound in suggestive matter to the pigeon fancier. “A.—The eggs of domesticated birds are not by any means endowed with the same degree of vitality, as those of the bird in its natural state of freedom and wildness. In so many words, the greater the degree of domestication, the greater the loss in vitality to the egg. B.—The greater the delay betwixt the moment of laying and that of sitting, when breeding is in question, the less is the chance of success. After a lapse of from thirty-two to thirty-five days from laying, the egg loses all its faculties, and becomes incapable of further development even under the most favourable conditions of incubation. C.—The texture of the shell plays a most important part in the work of incubation. The egg of the bird reared in captivity, is less regular than that of the bird living in its normal freedom and liberty. The shell of the egg in the first-named bird, is less dense and thick than that of the second. It is simple enough to verify this by holding the two before any strong light. The circumstance of the effect of texture of shell on the results of incubation may, in principle, appear extraordinary or at any rate doubtful; nevertheless it needs no more than a moment's reflection, in order to prove what passes habitually under our eyes. Subjected to incubating temperature, the egg with the thin and less close texture, suffers a loss in its contents through evaporation; this loss is an inverse proportion to the quality of the shell. The denser, closer and more resistant the shell, the less the loss through the action of external elements. In the contrary case, the results obtained are altogether of the opposite character; during the first days of incubation, all passes normally, but towards the fifteenth day, the quantity of liquid lost through evaporation is already so marked, that the embryo feels the effects, its development is arrested, and it will even perish altogether. It is therefore a gross error to suppose, as is so much the case in country parts, that the thinner the shell is, the greater are the chances of successful sitting. I have frequently heard breeders affirm in all the sincerity of conviction, that the thinner the shell, the greater